



## 2N4901 – 2N4902 – 2N4903

### PNP SILICON TRANSISTORS, EPITAXIAL BASE

The 2N4901, 2N4902, 2N4903 are mounted in Jedec TO-3 metal case. They are intended for general-purpose switching and power amplifier applications. Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
$V_{CBO}$	Collector to Base Voltage	2N4901	-40	V	
		2N4902	-60		
		2N4903	-80		
$V_{CEO}$	#Collector-Emitter Voltage	2N4901	-40	V	
		2N4902	-60		
		2N4903	-80		
$V_{CER}$	Collector-Emitter Voltage	2N4901	-40	V	
		2N4902	-60		
		2N4903	-80		
$V_{EBO}$	Emitter-Base Voltage		-5	V	
$V_{CEX}$	Collector-Base Voltage	$V_{BE}=1.5\text{ V}$	2N4901	-40	V
			2N4902	-60	
			2N4903	-80	
$I_C$	Collector Current – Continuous		-5	A	
$I_{CM}$	Collector Current – Peak	$t_p=5\text{ ms}$	-10	A	
$I_B$	Base Current – Continuous		-1	A	
$P_{TOT}$	Power Dissipation		87.5	W	
$T_J$	Junction Temperature		200	°C	
$T_{STG}$	Storage Temperature		-65 to +200	°C	

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJC}$	Thermal Resistance, Junction to Case	2	°C/W
$R_{thJA}$	Junction to Free Air Thermal Resistance	43.7	°C/W



## 2N4901 – 2N4902 – 2N4903

### ELECTRICAL CHARACTERISTICS

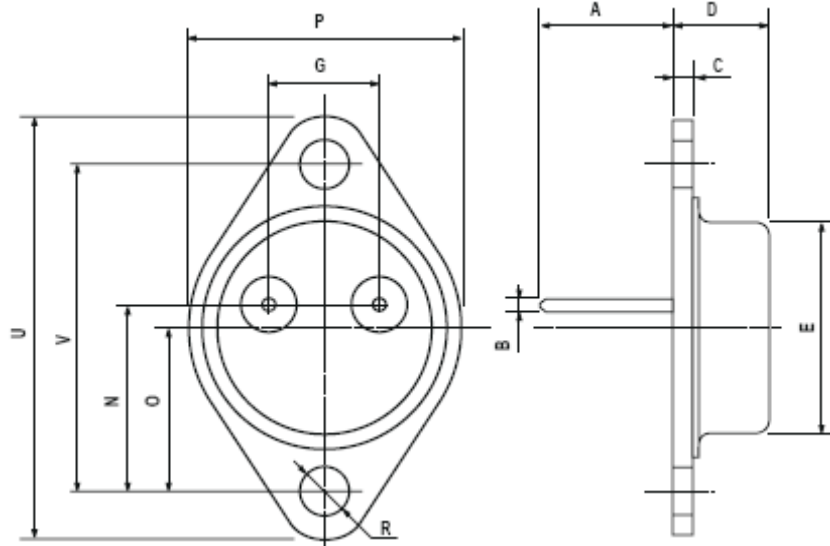
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{ mA dc}, I_B=0$	2N4901	-40	-	-	V
			2N4902	-60			
			2N4903	-80			
$I_{CBO}$	Collector-Base cut-off Current	$V_{CE}=-40\text{ V}, I_E=0$	2N4901	-	-	-0.1	mA
		$V_{CE}=-60\text{ V}, I_E=0$	2N4902	-	-	-0.1	
		$V_{CE}=-80\text{ V}, I_E=0$	2N4903	-	-	-0.1	
$I_{CEO}$	Collector cut-off Current	$V_{CE}=-40\text{ V}, I_B=0$	2N4901	-	-	-1	mA
		$V_{CE}=-60\text{ V}, I_B=0$	2N4902	-	-	-1	
		$V_{CE}=-80\text{ V}, I_B=0$	2N4903	-	-	-1	
$I_{CEX}$	Collector Cutoff Current	$V_{CE}=-40\text{ V}, V_{EB}=1.5\text{ V}$	2N4901	-	-	-0.1	mA
		$V_{CE}=-40\text{ V}, V_{EB}=1.5\text{ V}$ $T_{CASE}=150^\circ\text{C}$		-	-	-2.0	
		$V_{CE}=-60\text{ V}, V_{EB}=1.5\text{ V}$	2N4902	-	-	-0.1	
		$V_{CE}=-60\text{ V}, V_{EB}=1.5\text{ V}$ $T_{CASE}=150^\circ\text{C}$		-	-	-2.0	
		$V_{CE}=-80\text{ V}, V_{EB}=1.5\text{ V}$	2N4903	-	-	-0.1	
		$V_{CE}=-80\text{ V}, V_{EB}=1.5\text{ V}$ $T_{CASE}=150^\circ\text{C}$		-	-	-2.0	
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=5.0\text{ V}, I_C=0$	2N4901	-	-	-1.0	mA
			2N4902				
			2N4903				
$h_{FE}$	DC Current Gain (*)	$V_{CE}=-2.0\text{ V}, I_C=-1.0\text{ A}$	2N4901	20	-	80	V
			2N4902				
			2N4903				
		$V_{CE}=-2.0\text{ V}, I_C=-5.0\text{ A}$	2N4901	7	-	-	
			2N4902				
			2N4903				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-1.0\text{ A}, I_B=-0.1\text{ A}$	2N4901	-	-	-0.4	V
			2N4902				
			2N4903				
		$I_C=-5.0\text{ A}, I_B=-1.0\text{ A}$	2N4901	-	-	-1.5	
			2N4902				
			2N4903				
$V_{BE}$	Base-Emitter Voltage (*)	$I_C=-1.0\text{ A}, V_{CE}=-2.0\text{ V}$	2N4901	-	-	-1.2	V
			2N4902				
			2N4903				
$f_T$	Transition Frequency	$V_{CE}=-10\text{ V}, I_C=-1\text{ A}$	2N4901	4	-	-	MHz
			2N4902				
			2N4903				

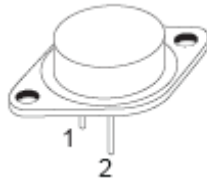
(\*) Pulse Width  $\approx 300\ \mu\text{s}$ , Duty Cycle  $\angle 2.0\%$

**2N4901 – 2N4902 – 2N4903**
**MECHANICAL DATA CASE TO-3**

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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