

2N4901 – 2N4902 – 2N4903
PNP SILICON TRANSISTORS, EPITAXIAL BASE

LF Large signal power amplification
Switching medium current

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		2N4901 -5.0	V
			2N4902	
			2N4903	
V_{CEX}	Collector-Base Voltage	$V_{BE}=1.5\text{ V}$	2N4901 -40	V
			2N4902 -60	
			2N4903 -80	
I_C	Collector Current – Continuous		2N4901 -5	A
			2N4902	
			2N4903	
I_{CM}	Collector Current – Peak	$t_p=5\text{ ms}$	2N4901 -10	A
			2N4902	
			2N4903	
I_B	Base Current – Continuous		2N4901 -1	A
			2N4902	
			2N4903	
P_{TOT}	Power Dissipation		2N4901 87.5	W
			2N4902	
			2N4903	
T_J	Junction Temperature		2N4901 200	°C
			2N4902	
			2N4903	
T_{STG}	Storage Temperature		2N4901 -65 to +200	°C
			2N4902	
			2N4903	

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THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	2	°C/W
R_{thJA}	Junction to Free Air Thermal Resistance	47.3	°C/W

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CE0(BR)}$	Collector-Emitter Breakdown 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	-	-	1.0	mA
		$V_{CE}=-60\text{ V}, I_E=0$	2N4902	-	-	1.0	
		$V_{CE}=-80\text{ V}, I_E=0$	2N4903	-	-	1.0	
I_{CEO}	Collector-Emitter cut-off Current	$V_{CE}=-40\text{ V}, I_B=0$	2N4901	-	-	1.0	mA
		$V_{CE}=-60\text{ V}, I_B=0$	2N4902	-	-	1.0	
		$V_{CE}=-80\text{ V}, I_B=0$	2N4903	-	-	1.0	
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	
		$V_{CE}=-60\text{ V}, V_{EB}=1.5\text{ V}, T_{CASE}=150^\circ\text{C}$		-	-	-2.0	
h_{21E}	DC Current Gain (*)	$V_{CE}=-2.0\text{ V}, I_C=-1.0\text{ A}$	2N4901 2N4902 2N4903	20	-	80	V
		$V_{CE}=-2.0\text{ V}, I_C=-5.0\text{ A}$	2N4901 2N4902 2N4903	7	-	-	
h_{21e}	Forward Current Transfer Ratio (*)	$V_{CE}=-10\text{ V}, I_C=-0.5\text{ A}, f=1.0\text{ kHz}$	2N4901 2N4902 2N4903	20	-	-	V
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-1.0\text{ A}, I_B=-0.1\text{ A}$	2N4901 2N4902 2N4903	-	-	-0.4	V
		$I_C=-5.0\text{ A}, I_B=-1.0\text{ A}$	2N4901 2N4902 2N4903	-	-	-1.5	

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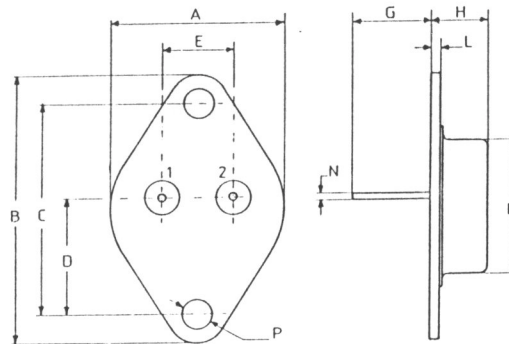
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	mA
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage (*)	$I_C=-5.0\text{ A}$, $I_B=-1.0\text{ A}$	2N4901 2N4902 2N4903	-	1.7	-	V
V_{BE}	Base-Emitter Voltage (*)	$I_C=-1.0\text{ A}$, $V_{CE}=-2.0\text{ V}$	2N4901 2N4902 2N4903	-	-	-1.2	V
f_T	Transition Frequency	$V_{CE}=-10\text{ V}$, $I_C=-1.0\text{ A}$, $f=1.0\text{ kHz}$	2N4901 2N4902 2N4903	4	-	-	MHz
$I_{s/b}$	Second Breakdown Collector Current	$t=1\text{ s}$, $V_{CE}=40\text{ V}$, $T_{CASE}=100^\circ\text{C}$	2N4901 2N4902 2N4903	1.25	-	-	A

In accordance with JEDEC Registration Data

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

MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,45	1
B	38,8	1,52
C	30,09	1,184
D	17,11	0,67
E	9,78	0,38
G	11,09	0,43
H	8,33	0,32
L	1,62	0,06
M	19,43	0,76
N	1	0,04
P	4,08	0,16



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.
Data are subject to change without notice.*