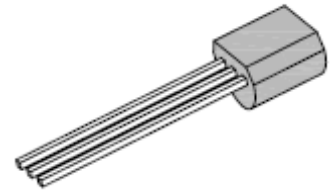


## Small Signal General Purpose Transistors (NPN)

### Features

- NPN Silicon Epitaxial Transistor for Switching and Amplifier Applications
- RoHS Compliance



TO-92



### Mechanical Data

<b>Case:</b>	TO-92, Plastic Package
<b>Terminals:</b>	Solderable per MIL-STD-202G, Method 208
<b>Weight:</b>	0.18 gram

### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	PN100	PN100A	Unit
<b>V<sub>CEO</sub></b>	Collector-Emitter Voltage	35		V
<b>V<sub>CBO</sub></b>	Collector-Base Voltage	60		V
<b>V<sub>EBO</sub></b>	Emitter-Base Voltage	5		V
<b>I<sub>C</sub></b>	Collector Current Continuous	500		mA
<b>P<sub>D</sub></b>	Power Dissipation at T <sub>A</sub> =25°C	625		mW
<b>R<sub>θJA</sub></b>	Thermal Resistance Junction to Ambient Air	200		° C/W
<b>T<sub>J</sub> , T<sub>STG</sub></b>	Operation and Storage Junction Temperature Range	-55 to +150		° C

# Small Signal General Purpose Transistors (NPN)

## PN100/PN100A

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	PN100		PN100A		Unit	Conditions
		Min.	Max.	Min.	Max.		
<b>V<sub>(BR)CBO</sub></b>	Collector-Base Breakdown Voltage	60	-	60	-	V	I <sub>C</sub> =100μA, I <sub>E</sub> =0
<b>V<sub>(BR)CEO</sub>*</b>	Collector-Emitter Breakdown Voltage	35	-	35	-	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0
<b>V<sub>(BR)EBO</sub></b>	Emitter-Base Breakdown Voltage	5	-	5	-	V	I <sub>E</sub> =100μA, I <sub>C</sub> =0
<b>V<sub>CE(sat)</sub>*</b>	Collector Emitter Saturation Voltage	-	0.4	-	0.4	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA
		-	1	-	1		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
<b>V<sub>BE(sat)</sub>*</b>	Base Emitter Saturation Voltage	-	0.95	-	0.95	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA
		-	1.2	-	1.2		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
<b>I<sub>CBO</sub></b>	Base Cut-Off Current	-	500	-	500	nA	V <sub>CB</sub> =35V, I <sub>E</sub> =0
<b>h<sub>FE</sub>*</b>	D.C. Current Gain	40	-	40	-		V <sub>CE</sub> =1V, I <sub>C</sub> =1mA
		100	450	300	600		V <sub>CE</sub> =1V, I <sub>C</sub> =10mA
		100	-	100	-		V <sub>CE</sub> =1V*, I <sub>C</sub> =150mA
<b>f<sub>T</sub></b>	Current Gain-Bandwidth Product	200	-	200	-	MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=100MHz

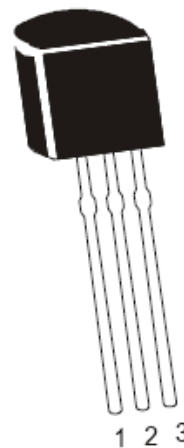
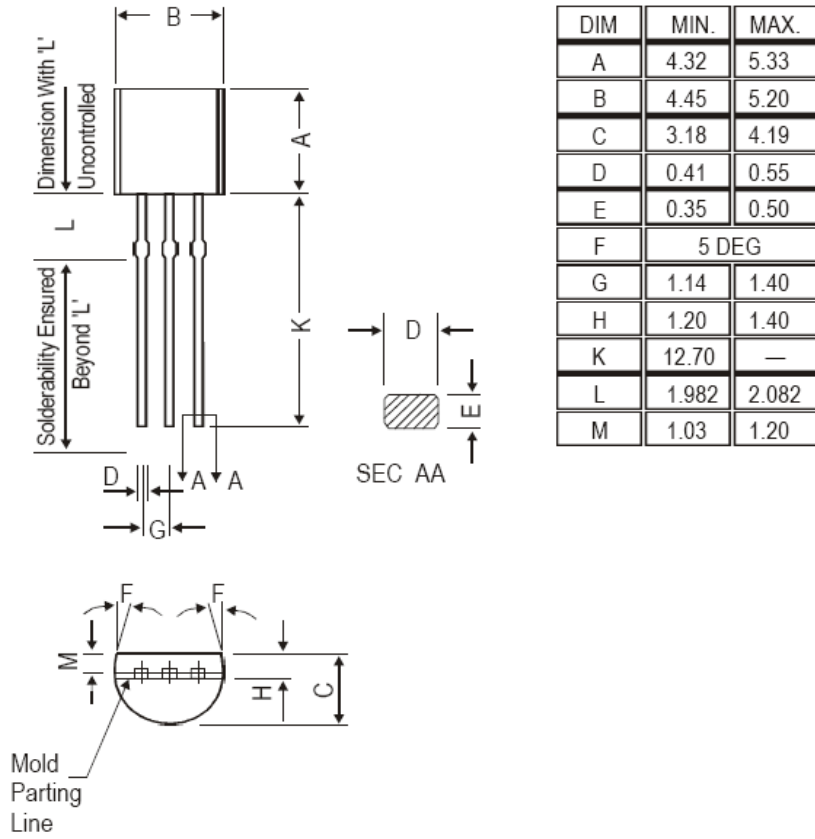
\*Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

# Small Signal General Purpose Transistors (NPN)

## PN100/PN100A

Dimensions in mm

TO-92



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR

1 2 3

# Small Signal General Purpose Transistors (NPN)

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PN100/PN100A

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