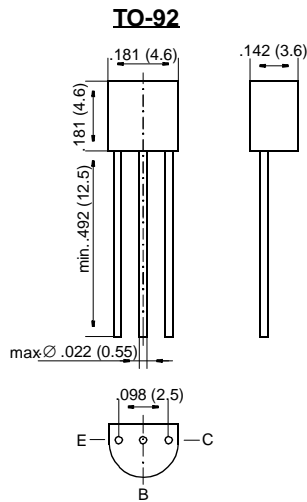


# MPSA92, MPSA93

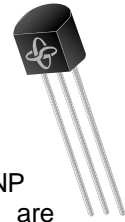
## Small Signal Transistors (PNP)



Dimensions in inches and (millimeters)

### FEATURES

- ◆ PNP Silicon Epitaxial Planar Transistors especially suited as line switch in telephone subsets and in video output stages of TV receivers and monitors.
- ◆ As complementary types, the PNP transistors MPSA42 and MPSA43 are recommended.



### MECHANICAL DATA

**Case:** TO-92 Plastic Package

**Weight:** approx. 0.18 g

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

### Absolute Maximum Ratings

		Symbol	Value	Unit
Collector-Emitter Voltage	<b>MPSA92</b> <b>MPSA93</b>	$-V_{CEO}$	300	V
		$-V_{CEO}$	200	V
Collector-Base Voltage	<b>MPSA92</b> <b>MPSA93</b>	$-V_{CB0}$	300	V
		$-V_{CB0}$	200	V
Emitter-Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	500	mA
Power Dissipation at $T_{amb} = 25\text{ °C}$		$P_{tot}$	625 <sup>1)</sup>	mW
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_S$	-65 to +150	°C

<sup>1)</sup> Valid provided that lead are kept at ambient temperature at a distance of 2 mm from case.

# MPSA92, MPSA93

## ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage $-I_C = 10 \text{ mA}, I_B = 0$	<b>MPSA92</b> <b>MPSA93</b>	$-V_{(BR)CEO}$	300	–	–	V
		$-V_{(BR)CEO}$	200	–	–	V
Collector-Base Breakdown Voltage $-I_C = 100 \mu\text{A}, I_E = 0$	<b>MPSA92</b> <b>MPSA93</b>	$-V_{(BR)CBO}$	300	–	–	V
		$-V_{(BR)CBO}$	200	–	–	V
Emitter-Base Breakdown Voltage $-I_E = 100 \mu\text{A}, I_C = 0$		$-V_{(BR)EBO}$	5	–	–	V
Collector-Base Cutoff Current $-V_{CB} = 200 \text{ V}, I_E = 0$ $-V_{CB} = 160 \text{ V}, I_E = 0$	<b>MPSA92</b> <b>MPSA93</b>	$-I_{CBO}$	–	–	250	nA
		$-I_{CBO}$	–	–	250	nA
Emitter-Base Cutoff Current $-V_{EB} = 3 \text{ V}, I_C = 0$		$-I_{EBO}$	–	–	100	nA
DC Current Gain $-I_C = 1 \text{ mA}, -V_{CE} = 10 \text{ V}$ $-I_C = 10 \text{ mA}, -V_{CE} = 10 \text{ V}$ $-I_C = 30 \text{ mA}, -V_{CE} = 10 \text{ V}$		$h_{FE}$	25	–	–	–
		$h_{FE}$	40	–	–	–
		$h_{FE}$	25	–	–	–
Collector-Emitter Saturation Voltage $-I_C = 20 \text{ mA}, -I_B = 2 \text{ mA}$		$-V_{CEsat}$	–	–	500	mV
Base-Emitter Saturation Voltage $-I_C = 20 \text{ mA}, -I_B = 2 \text{ mA}$		$-V_{BEsat}$	–	–	900	mV
Gain-Bandwidth Product $-I_C = 10 \text{ mA}, -V_{CE} = 20 \text{ V}, f = 100 \text{ MHz}$		$f_T$	50	–	–	MHz
Collector-Base Capacitance $-V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	<b>MPSA92</b> <b>MPSA93</b>	$C_{CBO}$	–	–	6	pF
		$C_{CBO}$	–	–	8	pF
Thermal Resistance Junction to Ambient Air		$R_{thJA}$	–	–	200 <sup>1)</sup>	K/W

<sup>1)</sup> Valid provided that lead are kept at ambient temperature at a distance of 2 mm from case.