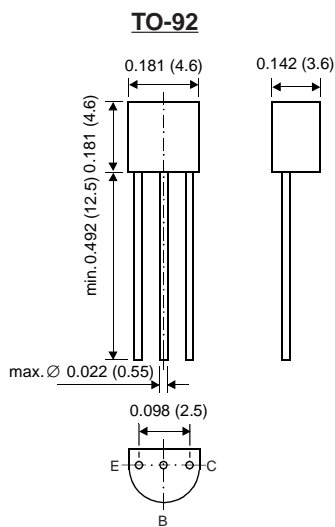


# MPSA56

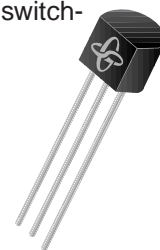
## Small Signal Transistors (PNP)



Dimensions in inches and (millimeters)

### FEATURES

- ◆ PNP Silicon Epitaxial Planar Transistor for switching and amplifier applications.
- ◆ As complementary type, the NPN transistor MPSA06 is recommended.
- ◆ On special request, this transistor is also manufactured in the pin configuration TO-18.
- ◆ This transistor is also available in the SOT-23 case with the type designation MMBTA56.



### MECHANICAL DATA

**Case:** TO-92 Plastic Package

**Weight:** approx. 0.18g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$-V_{CB0}$	80	V
Collector-Emitter Voltage	$-V_{CEO}$	80	V
Emitter-Base Voltage	$-V_{EBO}$	4.0	V
Collector Current	$-I_C$	500	mA
Power Dissipation at $T_A = 25\text{ }^\circ\text{C}$ at $T_C = 25\text{ }^\circ\text{C}$	$P_{tot}$	625 1.5	mW W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	200 <sup>(1)</sup>	K/W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	- 55 to +150	$^\circ\text{C}$

<sup>1)</sup>Valid provided that leads are kept at ambient temperature

# MPSA56

## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	<i>SYMBOL</i>	<i>MIN.</i>	<i>.MAX.</i>	<i>UNIT</i>
Collector-Emitter Breakdown Voltage at $-I_C = 1 \text{ mA}$ , $I_B = 0 \text{ mA}$	$-V_{BR(CEO)}$	80	–	V
Emitter-Base Breakdown Voltage at $I_E = 100 \text{ mA}$ , $I_C = 0$	$-V_{(BR)EBO}$	4.0	–	V
Collector-Emitter Cutoff Current $-V_{CE} = 60 \text{ V}$ , $-I_B = 0$	$-I_{CES}$	–	100	nA
Collector-Base Cutoff Current $-V_{CB} = 80 \text{ V}$ , $I_E = 0$	$-I_{CBO}$	–	100	nA
Collector Saturation Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 10 \text{ mA}$	$-V_{CEsat}$	–	0.25	V
Base-Emitter On Voltage at $-I_C = 100 \text{ mA}$ , $-I_B = 10 \text{ mA}$ at $-I_C = 50 \text{ mA}$ , $-I_B = 5 \text{ mA}$	$-V_{BE(on)}$	–	1.2	V
DC Current Gain at $V_{CE} = 1 \text{ V}$ , $-I_C = 10 \text{ mA}$ at $V_{CE} = 1 \text{ V}$ , $-I_C = 100 \text{ mA}$	$h_{FE}$ $h_{FE}$	100 100	– –	– –
Gain-Bandwidth Product at $V_{CE} = 1 \text{ V}$ , $I_C = 100 \text{ mA}$ , $f = 100 \text{ MHz}$	$f_T$	50	–	MHz

1) Valid provided that electrodes are kept at ambient temperature