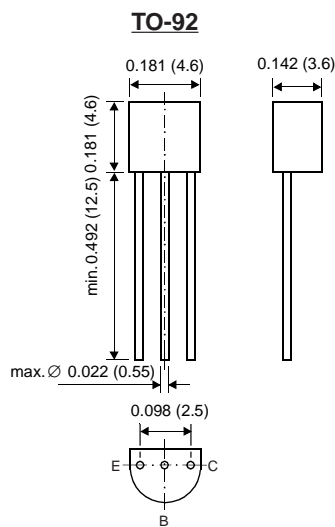


MPSA06

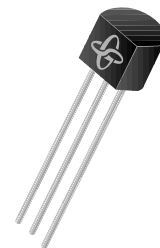
Small Signal Transistors (NPN)



Dimensions in inches and (millimeters)

FEATURES

- ◆ NPN Silicon Epitaxial Planar Transistor for switching and amplifier applications.
- ◆ As complementary type, the PNP transistor MPSA56 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 MMBTA06



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_{CBO}	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 ⁽¹⁾	K/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-65 to +150	°C

¹⁾Valid provided that leads are kept at ambient temperature

MPSA06

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 $I_C = 1 \text{ mA}$, $I_B = 0$	$V_{(BR)CEO}$	80	–	V
Emitter-Base Breakdown Voltage at $I_E = 100 \text{ } \mu\text{A}$, $I_C = 0$	$V_{(BR)EBO}$	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 $I_C = 10 \text{ mA}$, $I_B = 1 \text{ mA}$	$V_{BE(on)}$	–	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 $V_{CE} = 2.0 \text{ V}$, $I_C = 10 \text{ mA}$, $f = 100 \text{ MHz}$	f_T	100	–	MHz

1) Valid provided that leads are kept at ambient temperature

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Datasheets for electronics components.