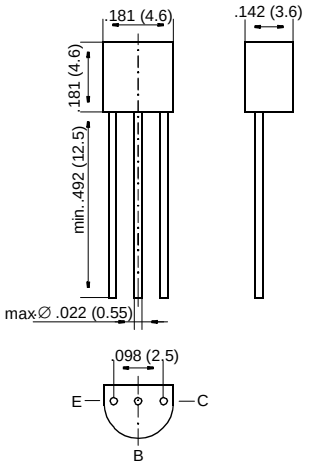
MPSA92, MPSA93

Small Signal Transistors (PNP)

TO-92



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	**MPSA92** **MPSA93**	$-V_{CEO}$ $-V_{CEO}$	300 200	V V
Collector-Base Voltage	**MPSA92** **MPSA93**	$-V_{CBO}$ $-V_{CBO}$	300 200	V V
Emitter-Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	500	mA
Power Dissipation at T_{amb} = 25 °C		P_{tot}	625[1)]	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_S	–65 to +150	°C

[1)] Valid provided that lead are kept at ambient temperature at a distance of 2 mm from case.

GENERAL SEMICONDUCTOR®

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

[1)] Valid provided that lead are kept at ambient temperature at a distance of 2 mm from case.