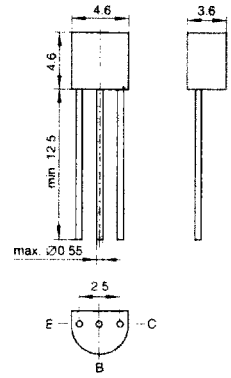
NPN Silicon Epitaxial Planar Transistors
especially suited as line switch in telephone subsets and in video output stages of TV receivers and monitors.

As complementary types, the PNP transistors MPSA92 and MPSA93 are recommended.



TO-92 Plastic Package
Weight approx. 0.18 g
Dimensions in mm

Absolute Maximum Ratings

		Symbol	Value	Unit
Collector-Emitter Voltage	**MPSA42**	V_{CEO}	300	V
	MPSA43	V_{CEO}	200	V
Collector-Base Voltage	**MPSA42**	V_{CBO}	300	V
	MPSA43	V_{CBO}	200	V
Emitter-Base Voltage		V_{EBO}	6	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...+150	°C

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

Characteristics at T_{amb} = 25 °C

		Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage I_C = 10 mA, I_B = 0	**MPSA42** **MPSA43**	$V_{(BR)CEO}$ $V_{(BR)CEO}$	300 200	– –	– –	V V
Collector-Base Breakdown Voltage I_C = 100 µA, I_E = 0	**MPSA42** **MPSA43**	$V_{(BR)CBO}$ $V_{(BR)CBO}$	300 200	– –	– –	V V
Emitter-Base Breakdown Voltage I_E = 100 µA, I_C = 0		$V_{(BR)EBO}$	6	–	–	V
Collector-Base Cutoff Current V_{CB} = 200 V, I_E = 0 V_{CB} = 160 V, I_E = 0	 **MPSA42** **MPSA43**	 I_{CBO} I_{CBO}	 – –	 – –	 100 100	 nA nA
Emitter-Base Cutoff Current V_{EB} = 6 V, I_C = 0 V_{EB} = 4 V, I_C = 0	 **MPSA42** **MPSA43**	 I_{EBO} I_{EBO}	 – –	 – –	 100 100	 nA 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 40	 – – –	 – – –	 – – –
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_E = 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	**MPSA42** **MPSA43**	C_{CBO} C_{CBO}	– –	– –	3 4	pF pF
Thermal Resistance Junction to Ambient Air		R_{thA}	–	–	200[1]	K/W

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