



TO-92 Plastic-Encapsulate Transistors

MPSA43 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25°C)}$$

Collector current

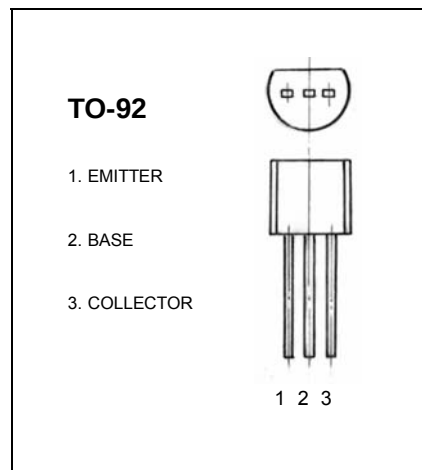
$$I_{CM}: 0.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 200 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	200			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = 1\text{mA}, I_B = 0$	200			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 160\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			0.1	μA
DC current gain	h_{FE}^*	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	25			
		$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	40			
		$V_{CE} = 10\text{V}, I_C = 30\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = 20\text{mA}, I_B = 2\text{mA}$			0.9	V
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 10\text{mA}$ $f = 100\text{MHz}$	50			MHz

* Pulse test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.