



# TO-92 Plastic-Encapsulate Transistors

## **MPSA18** TRANSISTOR ( NPN )

### FEATURES

Power dissipation

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

Collector current

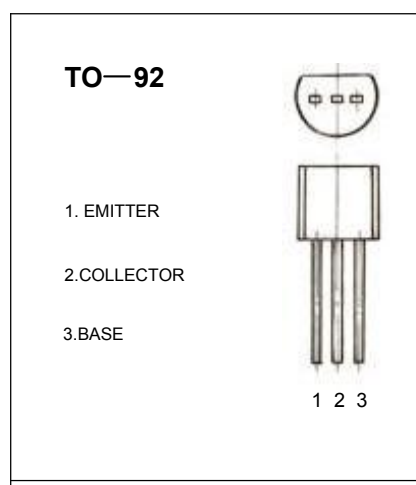
$$I_{CM}: 0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 45 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	45			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6.5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			50	$\mu\text{A}$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	400			
DC current gain(note)	$H_{FE(2)}$	$V_{CE}=5\text{V}, I_C=100\text{mA}$	500			
DC current gain(note)	$H_{FE(3)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	500		1500	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.3	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$			0.7	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=1.0\text{mA}$ $f=100\text{MHz}$	100			MHz

### CLASSIFICATION OF HFE

Rank	1	C	D
Range	400-700	700-1000	1000-1500

