



# TO-92 Plastic-Encapsulate Transistors

## MPS750 TRANSISTOR ( NPN )

### FEATURES

Power dissipation

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

Collector current

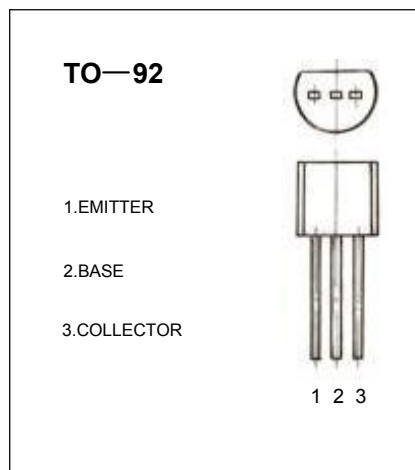
$$I_{CM}: 2.0 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 60 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C=0.1\text{mA}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01\text{mA}, I_C=0$	-5			V
Collector cut-off current	$I_{CEO}$	$V_{CE}=60\text{V}, I_B=0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=2\text{V}, I_C=50\text{mA}$	75			
DC current gain(note)	$H_{FE(2)}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	75		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=200\text{mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$			-1.2	V
Base-emitter voltage	$V_{BE}$	$I_E=1\text{V}, V_{CE}=2\text{V}$			-1.0	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=50\text{mA}$ $f=1000\text{MHz}$	75			MHz

### CLASSIFICATION OF HFE

<b>Rank</b>	1	C	D
<b>Range</b>	60-150	120-300	160-400