



TO-92 Plastic-Encapsulate Transistors

2N3706 TRANSISTOR (NPN)

FEATURES

Power dissipation

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

Collector current

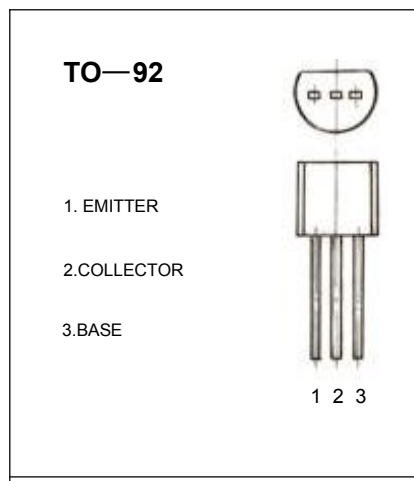
$$I_{CM}: 0.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 40 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20 \text{ V}, I_E=0$			100	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3 \text{ V}, I_C=0$			100	μA
DC current gain	$H_{FE(1)}$	$V_{CE}=2 \text{ V}, I_C=50 \text{ mA}$	30		600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100 \text{ mA}, I_B=5 \text{ mA}$			1.0	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C=100 \text{ mA}, V_{CE}=2 \text{ V}$	0.5		1.0	V
Current Gain-Bandwidth Product	fr	$V_{CE}=2 \text{ V}, I_C=50 \text{ mA}$	100			MHz

CLASSIFICATION OF HFE

Rank	1	2	3
Range	30-200	200-400	400-600