



TO-92 Plastic-Encapsulate Transistors

S9014 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.450 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

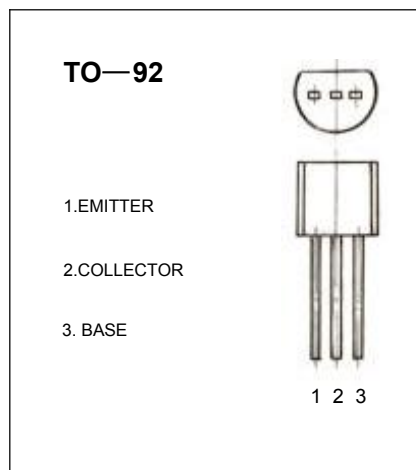
$$I_{CM}: 0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 50 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CEO}	$V_{CB}=50\text{V}, I_E=0$			50	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			50	μA
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	60		1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			1.0	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_E=0$ $f=.1\text{MHz}$	150	270		MHz

CLASSIFICATION OF HFE

Rank	1	2	3
Range	100-300	200-600	400-1000