



# TO-92 Plastic-Encapsulate Transistors

## S9015 TRANSISTOR ( NPN )

### FEATURES

Power dissipation

$P_{CM}$ : 0.45 W ( $T_{amb}=25^{\circ}C$ )

Collector current

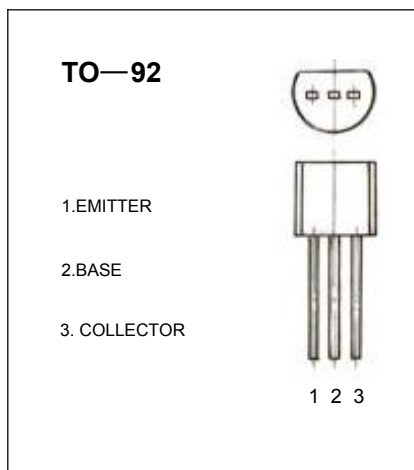
$I_{CM}$ : 0.1 A

Collector-base voltage

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

Operating and storage junction temperature range

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



### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1 mA, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-50 V, I_C=0$			0.05	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5 V, I_C=0$			0.05	$\mu A$
DC current gain(note)	$H_{FE(1)}$	$V_{CE}=-5V, I_C=1mA$	60		1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=-10mA$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$			1.0	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=10mA$ $f=30MHz$	150			MHz

### CLASSIFICATION OF HFE

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