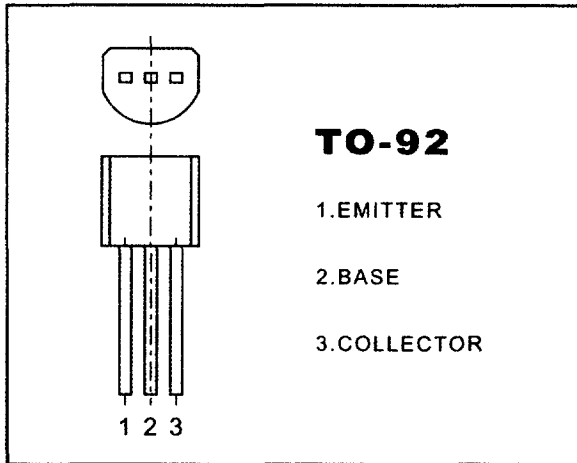


# TO-92 Plastic-Encapsulate Transistors

## S9018 TRANSISTOR(NPN)



### FEATURES

Power dissipation

$P_{CM}$ : 0.31W ( $T_{amb}=25^{\circ}C$ )

Current gain

$I_{CM}$ : 0.05 A

Collector-emitter voltage

$V_{(BR)CBO}$ : 25 V

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)

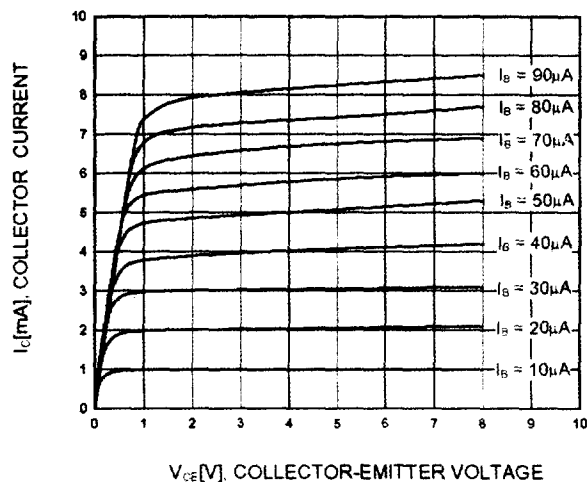
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	25		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 0.1 mA, I_B = 0$	18		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	4		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 20 V, I_E = 0$		0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE} = 15 V, I_B = 0$		0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 3 V, I_C = 0$		0.1	$\mu A$
DC current gain	$H_{FE}$	$V_{CE} = 5 V, I_C = 1 mA$	28	270	
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = 10 mA, I_B = 1 mA$		0.5	V
Base-emitter saturation voltage	$V_{BEsat}$	$I_C = 10 mA, I_B = 1 mA$		1.4	V
Transition frequency	f	$V_{CE} = 5 V, I_C = 5 mA$ $f = 400 MHz$	600		MHz

### CLASSIFICATION OF $H_{FE}$

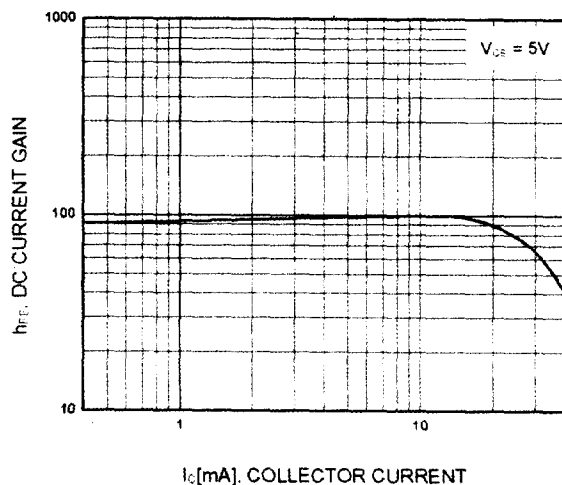
Rank	D	E	F	G	H	I	J
Range	28-45	39-60	54-80	72-108	97-146	132-198	180-270

# Typical Characteristics

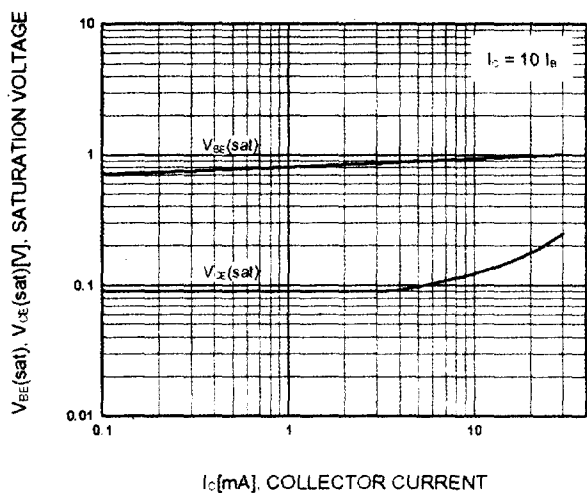
S9018



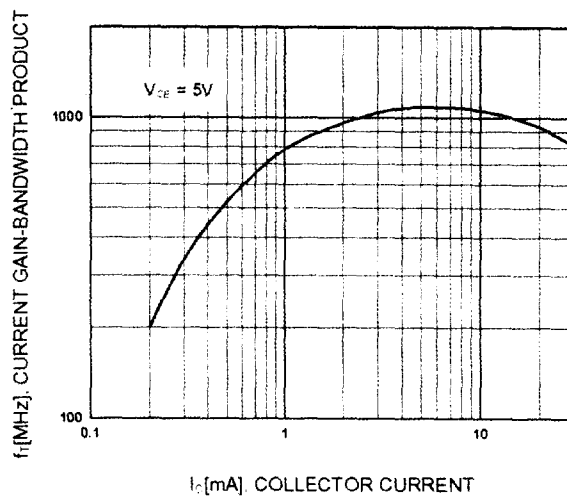
Static Characteristic



DC Current Gain



Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage



Current Gain Bandwidth Product