

S9018 TRANSISTOR (NPN)**FEATURES**

Power dissipation

 P_{CM} : 0.4 W ($T_{amb}=25^{\circ}C$)

Collector current

 I_{CM} : 0.05 A

Collector-base voltage

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

Operating and storage junction temperature range

 T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$ **TO-92**

1. EMITTER

2. BASE

3. COLLECTOR

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 0.1mA, I_B = 0$	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}	$V_{CB} = 20V, I_E = 0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 15V, I_B = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1mA$	28		270	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 1mA$			1.4	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 5mA$ $f = 400MHz$	600			MHz

CLASSIFICATION OF $h_{FE(1)}$

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