

TO-92 Plastic-Encapsulate Transistors

AV9014 TRANSISTOR (NPN)

FEATURES

Power dissipation

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

Collector current

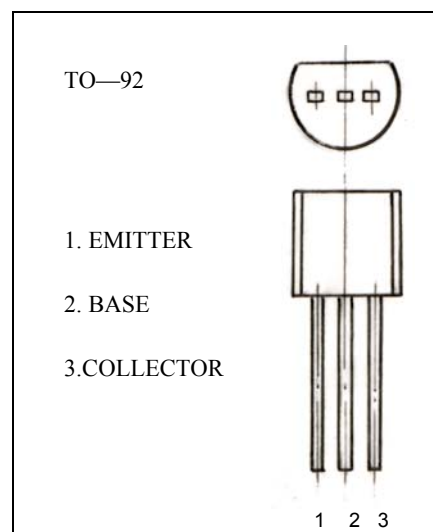
$I_{CM} : -0.1 \text{ A}$

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

Parameter	Symbol	Test conditions	MIN	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_{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 35 \text{ V}, I_B = 0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3 \text{ V}, I_C = 0$		0.1	μA
DC current gain	H_{FE}	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ mA}$	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	V
Transition frequency	f_T	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$ $f = 30 \text{ MHz}$	150		MHz

CLASSIFICATION OF HFE

Rank	A	B	C	D
Range	60-150	100-300	200-600	400-1000

Typical Characteristics

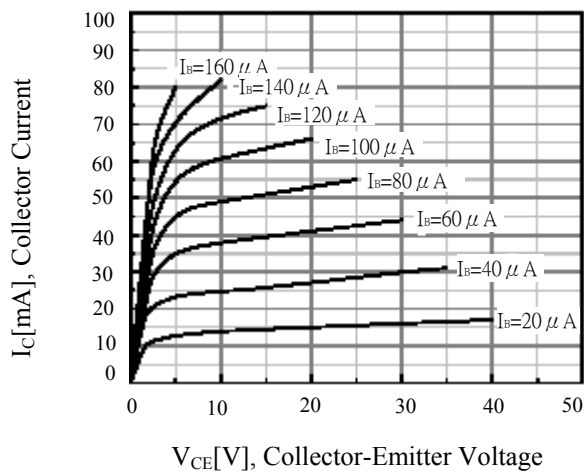


Figure 1. Static Characteristic

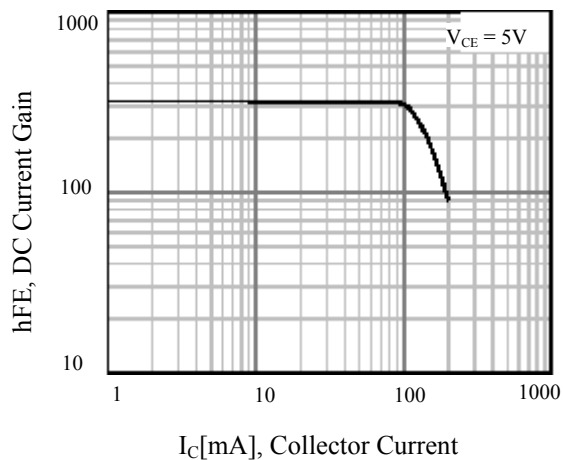


Figure 2. DC current Gain

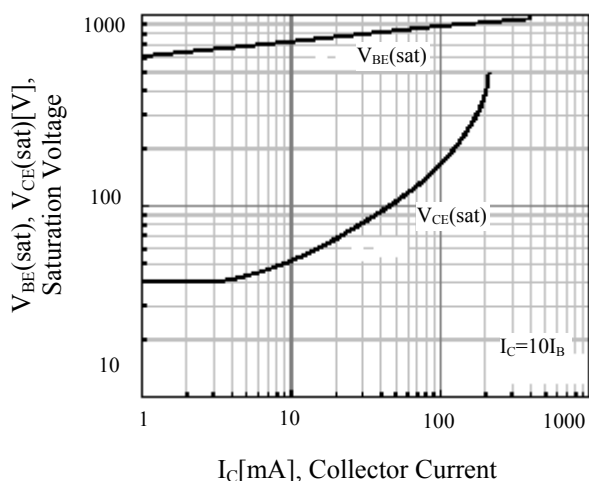


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

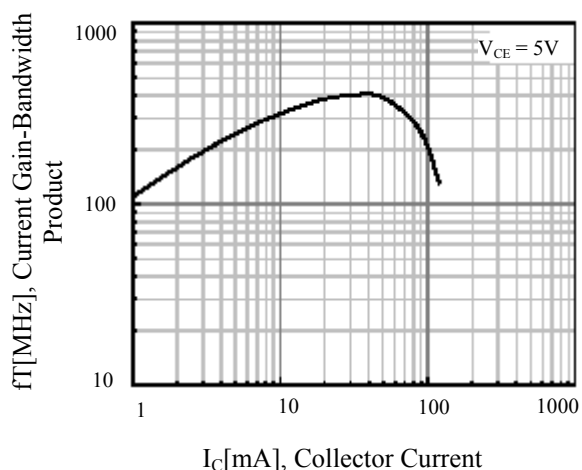


Figure 4. Current Gain Bandwidth Product