

TO-92 Plastic-Encapsulate Transistors

AV945 TRANSISTOR (NPN)

FEATURES

Power dissipation

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

Collector current

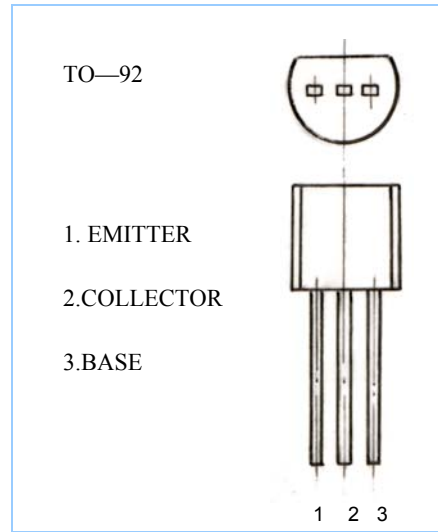
$$I_{CM} : 0.15 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : 60 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C= 1000 \mu\text{A} , I_E=0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C= 0.1 \text{ mA} , I_B=0$	50		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}	$V_{CB}= 60 \text{ V} , I_E=0$		0.1	μA
Collector cut-off current	I_{CER}	$V_{CE}= 55 \text{ V} , R=10\text{M}\Omega$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}= 5 \text{ V} , I_C=0$		0.1	μA
DC current gain	$H_{FE(1)}$	$V_{CE}= 6 \text{ V} , I_C= 1 \text{ mA}$	70	700	
	$H_{FE(2)}$	$V_{CE}= 6 \text{ V} , I_C=0.1 \text{ mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C= 100 \text{ mA} , I_B= 10\text{mA}$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C= 100\text{mA} , I_B= 10 \text{ mA}$		1	V
Base-emitter voltage	V_{BE}	$I_E= 310\text{mA}$		1.4	V
Transition frequency	f_T	$V_{CE}= 6 \text{ V} , I_C= 10 \text{ mA}$ $f=30 \text{ MHz}$	150		MHz

CLASSIFICATION OF $H_{FE(1)}$

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

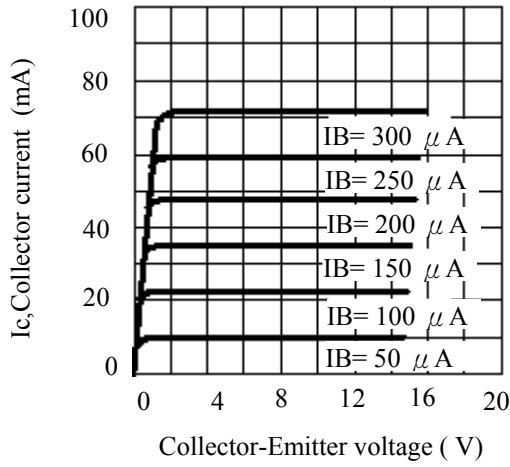


Fig.2 DC current Gain

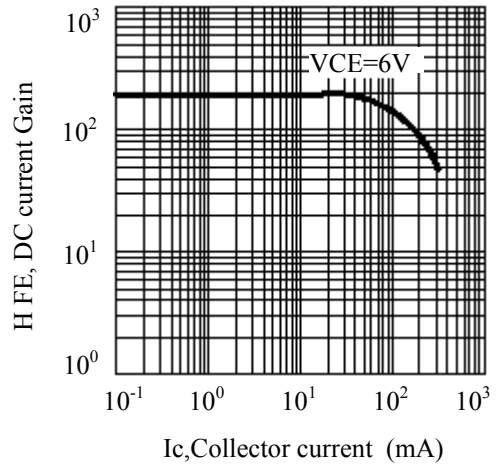


Fig.3 Base-Emitter on Voltage

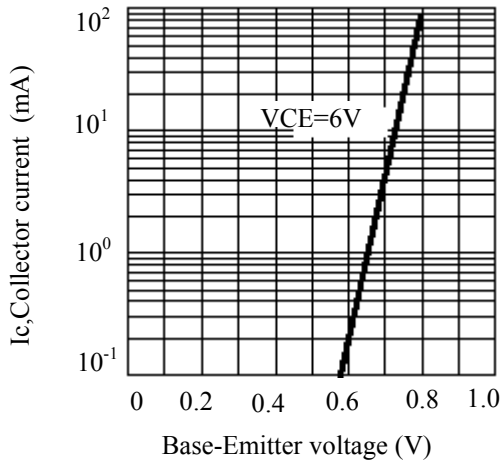


Fig.4 Saturation voltage

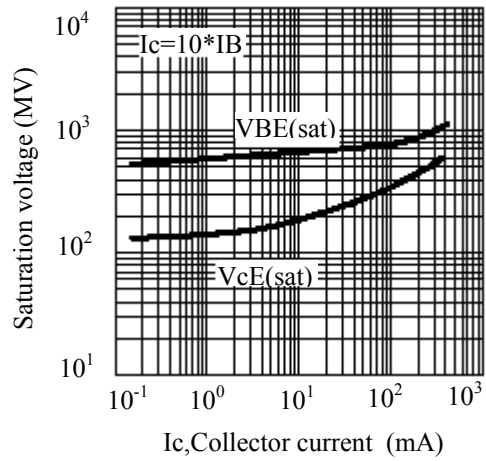


Fig.5 Current gain-bandwidth product

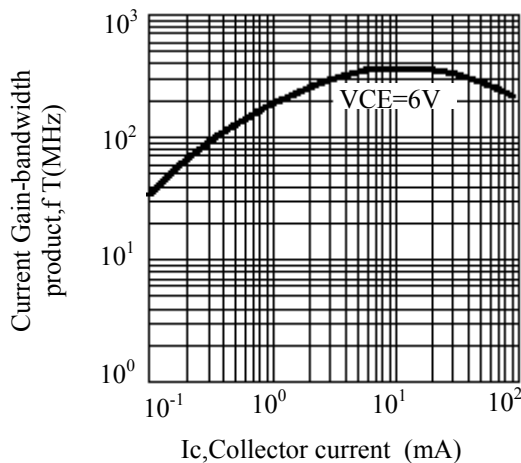


Fig.6 Collector output Capacitance

