

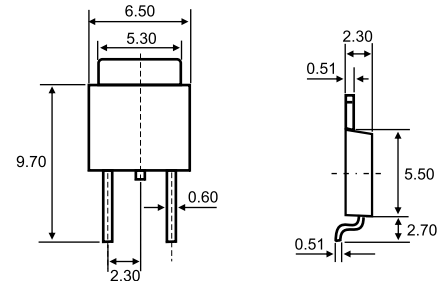
### TO-252

## Features

- ◆ Low speed switching

### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-30	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current -Continuous	-3	A
$P_C$	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	100	$^\circ\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-40\text{V}, I_E=0$			-1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-30\text{V}, I_B=0$			-10	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-6\text{V}, I_C=0$			-1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=-2\text{V}, I_C=-1\text{A}$	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-2\text{A}, I_B=-0.2\text{A}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-2\text{A}, I_B=-0.2\text{A}$			-1.5	V
Transition frequency	$f_T$	$V_{CE}=-5\text{V}, I_C=-0.1\text{A}$ $f=10\text{MHz}$	50	80		MHz

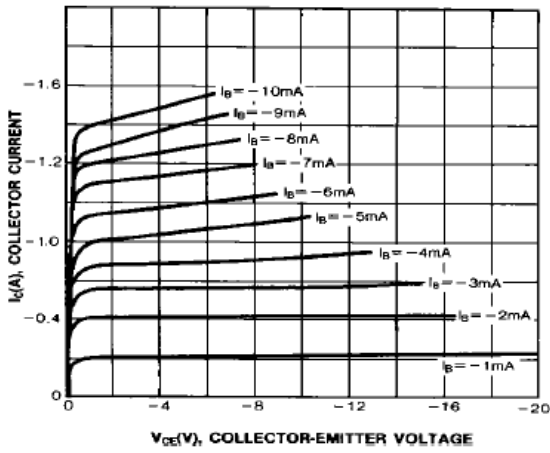
### CLASSIFICATION OF $h_{FE}$

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

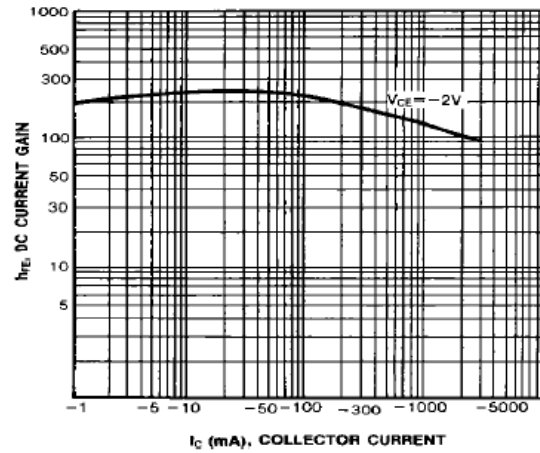


### Typical characteristics

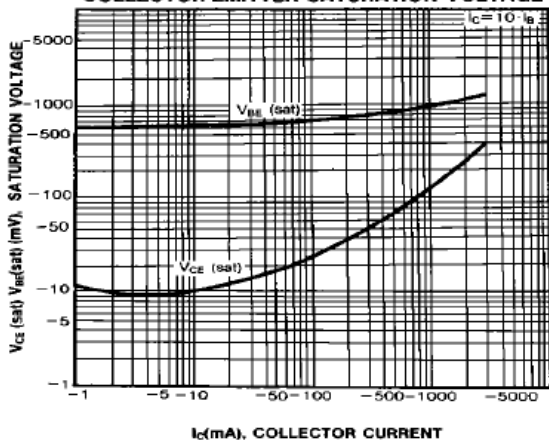
**STATIC CHARACTERISTIC**



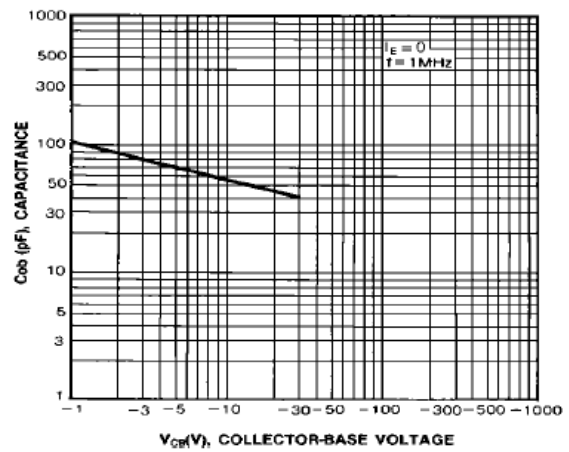
**DC CURRENT GAIN**



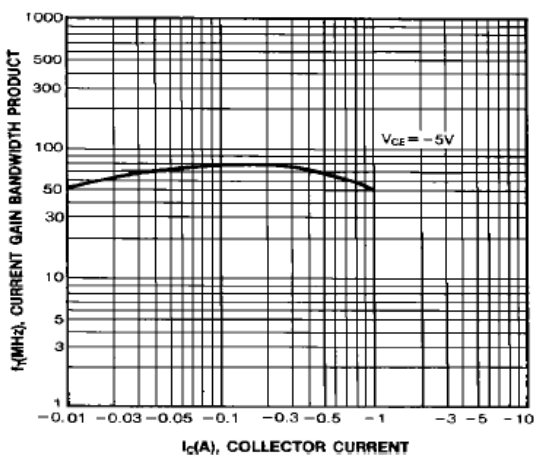
**BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE**



**COLLECTOR OUTPUT CAPACITANCE**



**CURRENT GAIN-BANDWIDTH PRODUCT**



**SAFE OPERATING AREA**

