

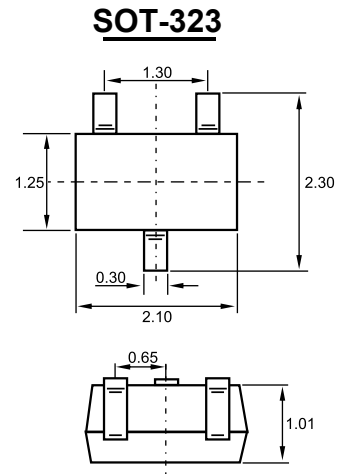
1. BASE
2. EMITTER
3. COLLECTOR

### Features

- ✧ Excellent  $h_{FE}$  linearity
- ✧ Complements the 2SC4081

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current -Continuous	-150	mA
$P_C$	Collector Power Dissipation	200	mW
$T_J$	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	$V_{(BR)CBO}$	$I_C=-50\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-50\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-6\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.5	V
Transition frequency	$f_T$	$V_{CE}=-12\text{V}, I_C=-2\text{mA}, f=30\text{MHz}$		140		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-12\text{V}, I_E=0, f=1\text{MHz}$		4	5	pF

### CLASSIFICATION OF $h_{FE}$

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS



### Typical Characteristics

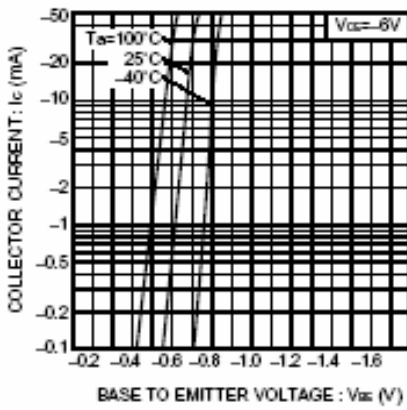


Fig.1 Grounded emitter propagation characteristics

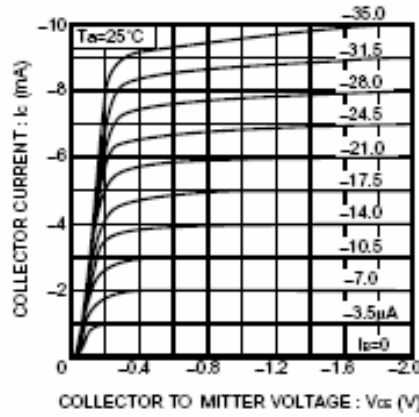


Fig.2 Grounded emitter output characteristics (I)

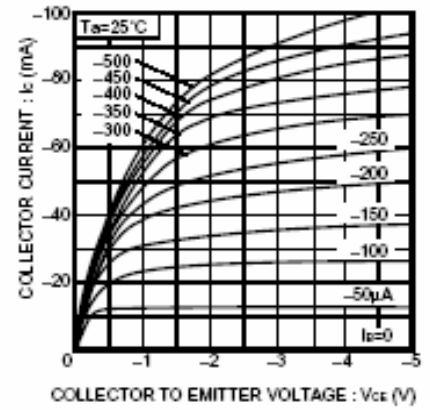


Fig.3 Grounded emitter output characteristics (II)

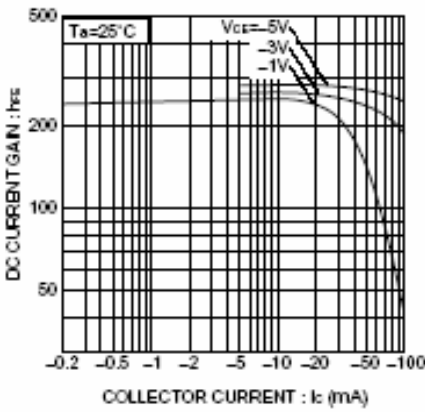


Fig.4 DC current gain vs. collector current (I)

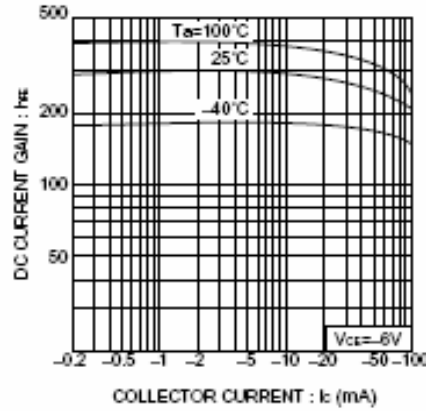


Fig.5 DC current gain vs. collector current (II)

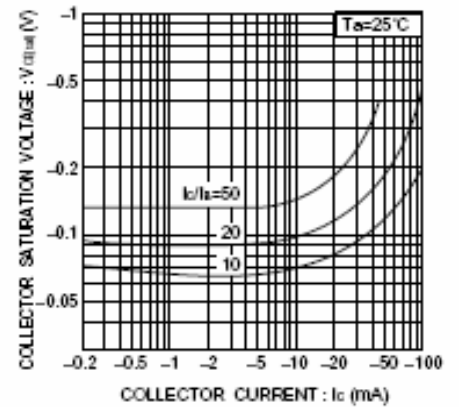


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

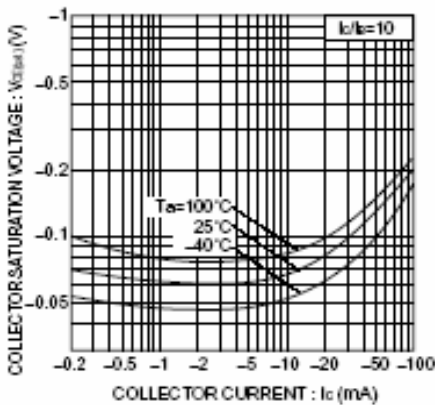


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

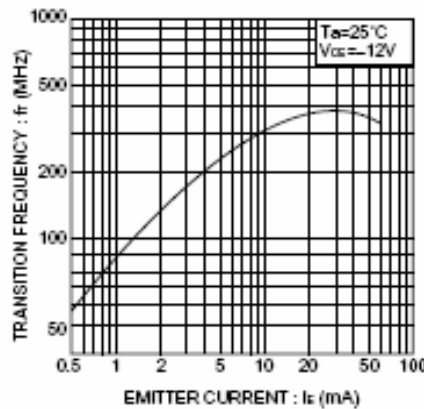


Fig.8 Gain bandwidth product vs. emitter current

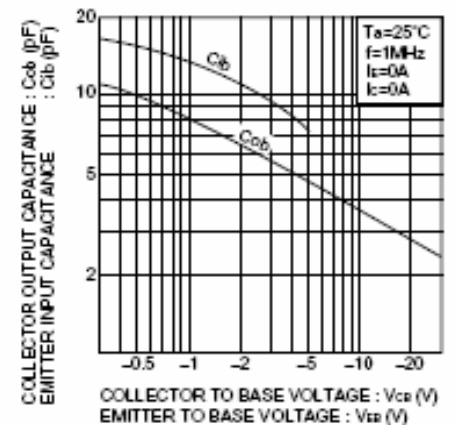


Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -323	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220