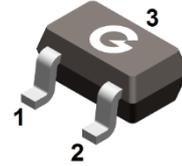
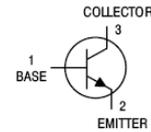


### Features

- Excellent  $h_{FE}$  linearity
- Complimentary to 2SA1586
- High voltage and current
- RoHS compliant with Halogen-free

HF



SOT-323

### Mechanical Data

- Case: SOT-323
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
2SC4116-O	SOT-323	3000 pcs / Tape & Reel	LO
2SC4116-Y	SOT-323	3000 pcs / Tape & Reel	LY
2SC4116-GR	SOT-323	3000 pcs / Tape & Reel	LG
2SC4116-BL	SOT-323	3000 pcs / Tape & Reel	LL

### Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	$V_{CBO}$	60	V
Collector-Emitter Breakdown Voltage	$V_{CEO}$	50	V
Emitter-Base Breakdown Voltage	$V_{EBO}$	5	V
Continuous Collector Current	$I_C$	150	mA
Peak Collector Current	$I_{CM}$	200	mA

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	100	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	1250	$^\circ\text{C}/\text{W}$
Operating junction Temperature	$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

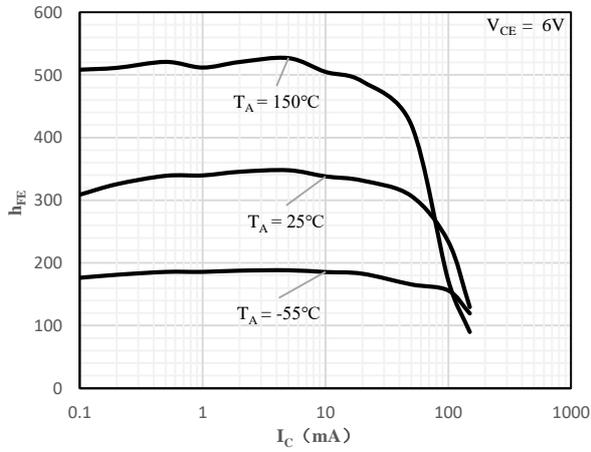
### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5	-	-	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 60\text{V}, I_E = 0$	-	-	0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	-	-	0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 6\text{V}, I_C = 2\text{mA}$	70	-	700	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_{CE} = 100\text{mA}, I_B = 10\text{mA}$	-	-	0.25	V
Transition Frequency	$f_T$	$I_C = 1\text{mA}, V_{CE} = 10\text{V}$	80	-	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	3.5	pF

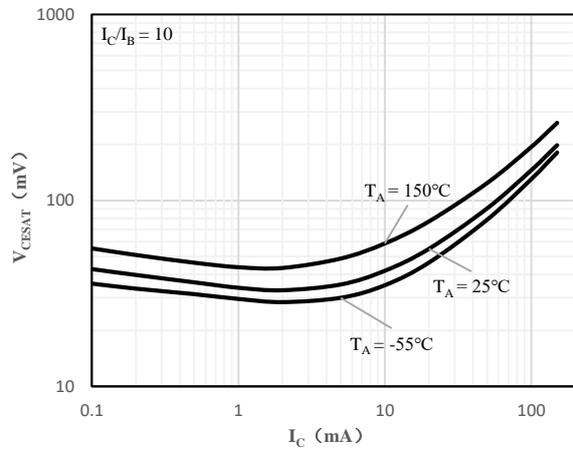
### Classification of $h_{FE}$

<b>Rank</b>	O	Y	GR	BL
<b>Range</b>	70-140	120-240	200-400	350-700
<b>Marking</b>	LO	LY	LG	LL

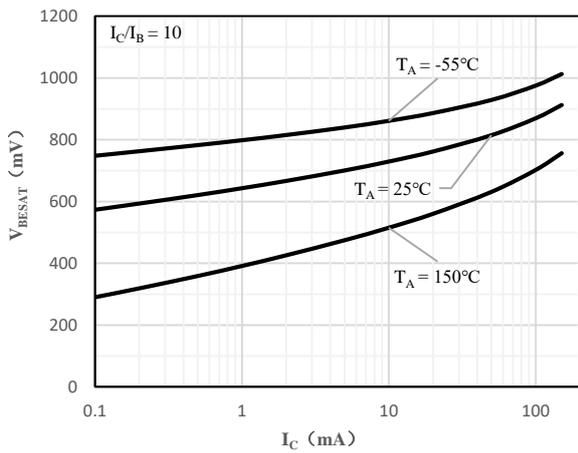
**Ratings and Characteristics Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



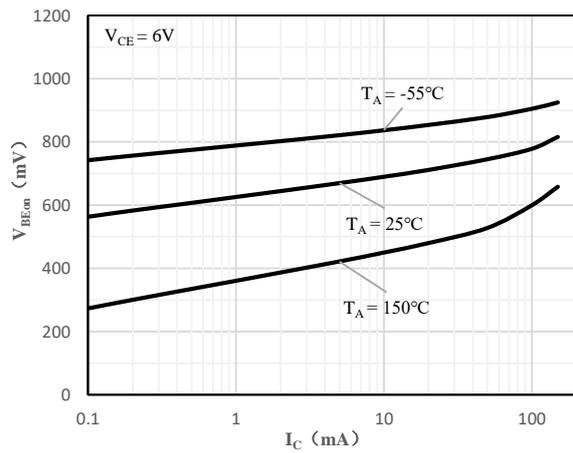
**Fig 1  $h_{FE}$  vs.  $I_C$  (GR)**



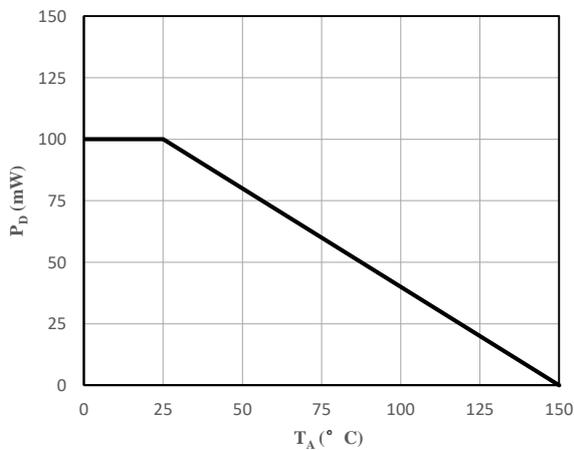
**Fig 2  $V_{CE(sat)}$  vs.  $I_C$**



**Fig 3  $V_{BE(sat)}$  vs.  $I_C$**

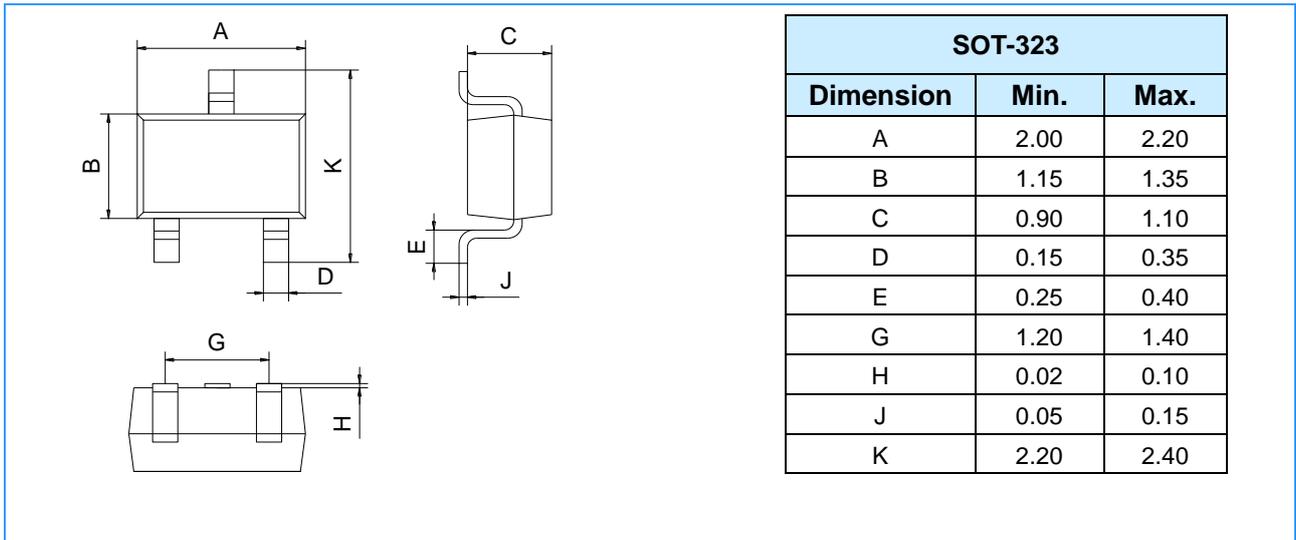


**Fig 4  $V_{BE(on)}$  vs.  $I_C$**



**Fig 4 Power Derating Curve**

**Package Outline Dimensions** (Unit: mm)



**Mounting Pad Layout** (Unit: mm)

