

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

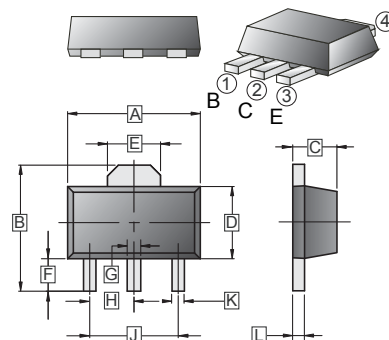
## FEATURES

- Large collector power dissipation  $P_C$
- Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Complementary to 2SB766A

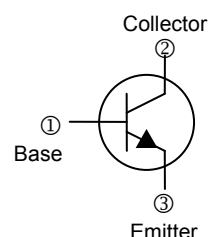
## SOT-89

## CLASSIFICATION OF $h_{FE}$ (1)

Product-Rank	2SD874A-Q	2SD874A-R	2SD874A-S
Range	85~170	120~240	170~340
Marking	YQ	YR	YS



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50	TYP
C	1.40	1.60	J	3.00	TYP
D	2.30	2.60	K	0.32	0.52
E	1.50	1.70	L	0.35	0.44
F	0.89	1.20			



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

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current-Continuous	$I_C$	1	A
Collector Power Dissipation	$P_C$	500	mW
Junction & Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	$I_C=10\mu\text{A}, I_E=0$
Collector-Emitter Breakdown	$V_{(BR)CEO}$	50	-	-	V	$I_C=2\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-Off Current	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	$V_{CB}=20\text{V}, I_E=0$
Emitter Cut-Off Current	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain	$h_{FE(1)}$	85	-	340		$V_{CE}=10\text{V}, I_C=500\text{mA}$
	$h_{FE(2)}$	50	-	-		$V_{CE}=5\text{V}, I_C=1\text{A}$
Collector-Emitter Saturation	$V_{CE(sat)}$	-	-	0.4	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C=500\text{mA}, I_B=50\text{mA}$
Transition Frequency	$f_T$	-	200	-	MHz	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=200\text{MHz}$
Collector Output Capacitance	$C_{OB}$	-	20	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

**CHARACTERISTIC CURVES**

