



## DESCRIPTION

The 2SD874A is available in SOT-89 Package

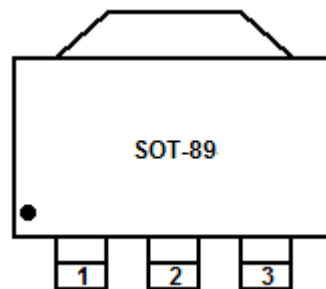
## FEATURES

- Available in SOT-89 Package

## ORDERING INFORMATION

| Package Type                             | Part Number        |
|--|--------------------|
| SOT-89                                   | 2SD874A            |
| Note                                     | SPQ: 1,000pcs/Reel |
| AiT provides all RoHS Compliant Products |                    |

## PIN DESCRIPTION



1. BASE
2. COLLECTOR
3. EMITTER



## ABSOLUTE MAXIMUM RATINGS

|   |              |
|---|--------------|
| $V_{CEO}$ , Collector-Emitter Voltage( $I_B=0$ )                                  | 32V          |
| $V_{CBO}$ , Collector-Base Voltage( $I_E=0$ )                                     | 40V          |
| $V_{EBO}$ , Emitter-Base Voltage( $I_C=0$ )                                       | 6V           |
| $I_C$ , Collector Current   | 1A           |
| $P_{TOT}$ , Total Device Dissipation( $T_A = 25^\circ\text{C}$ ) <sup>NOTE1</sup> | 1W           |
| $T_{JM}$ , Junction Temperature(Max)  | 150°C        |
| $T_{STG}$ , Storage Temperature   | -55°C ~150°C |

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Device mounted on a printed circuit board.

## ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$ , unless otherwise specified.

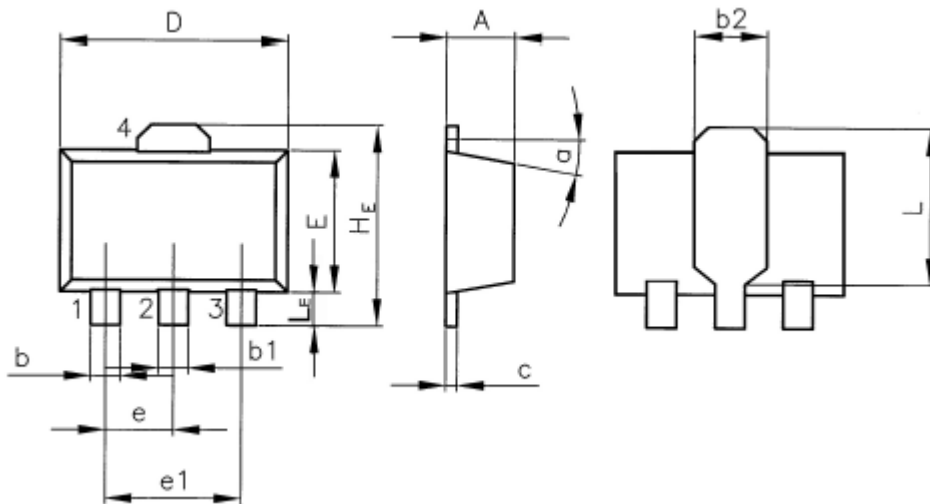
| Parameter  | Symbol        | Conditions                             | Min. | Typ. | Max. | Unit |
|--|---------------|--|------|------|------|------|
| Breakdown Voltage                                      | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$                | 32   |      |      | V    |
|  | $V_{(BR)CBO}$ | $I_C=50\mu\text{A}, I_E=0$             | 40   |      |      | V    |
|  | $V_{(BR)EBO}$ | $I_E=50\mu\text{A}, I_C=0$             | 6    |      |      | V    |
| Collector-Cutoff Current                               | $I_{CBO}$     | $V_{CB}=20\text{V}, I_E=0$             |      |      | 500  | nA   |
| DC Current Gain  | $h_{FE}$      | $I_C=100\text{mA}, V_{CE}=3.0\text{V}$ | 120  |      | 240  | -    |
| Collector- Emitter Saturation Voltage <sup>NOTE2</sup> | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$    |      |      | 0.50 | V    |
| Current Gain-Bandwidth Product                         | $f_T$         | $I_C=50\text{mA}, V_{CE}=5\text{V}$    | 150  |      |      | MHz  |

NOTE2: Pulse test; pulse width $\leq 300\mu\text{s}$ , duty cycle $\leq 2\%$ .



**PACKAGE INFORMATION**

Dimension in SOT-89 (Unit: mm)



| Symbol         | Min   | Typ   | Max   |
|----------------|-------|-------|-------|
| A              | -     | 1.500 | -     |
| b              | -     | -     | 0.650 |
| b1             | -     | -     | 0.650 |
| b2             | -     | 1.600 | -     |
| c              | 0.250 | -     | -     |
| D              | -     | 4.500 | -     |
| E              | -     | -     | 2.600 |
| e              | -     | 1.500 | -     |
| e1             | -     | 3.000 | -     |
| LE             | -     | -     | 4.250 |
| L              | 2.600 | -     | 2.950 |
| L <sub>E</sub> | 0.800 | -     | 1.200 |
| α              | -     | -     | 10°   |



## IMPORTANT NOTICE

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