



## DESCRIPTION

The 2SA1774Q~2SA1774S are available in SC-89 package

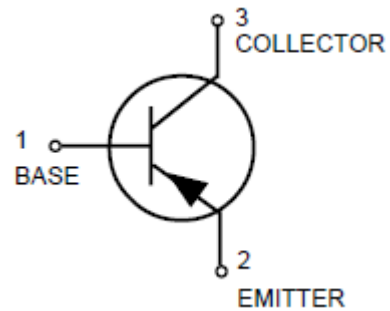
## FEATURES

- Available in SC-89 package

## ORDERING INFORMATION

| Package Type                             | Part Number         |
|------------------------------------------|---------------------|
| SC-89                                    | 2SA1774Q            |
|                                          | 2SA1774R            |
|                                          | 2SA1774S            |
| Note                                     | SPQ: 3,000pcs/ Reel |
| AiT provides all RoHS Compliant Products |                     |

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS

|                                       |                |
|---------------------------------------|----------------|
| $V_{CBO}$ , Collector-Base Voltage    | -60V           |
| $V_{CEO}$ , Collector-Emitter Voltage | -50V           |
| $V_{EBO}$ , Emitter-Base Voltage      | -6.0V          |
| $I_C$ , Collector Current             | -0.15A(DC)     |
| $P_C$ , Collector Power Dissipation   | 0.15W          |
| $T_J$ , Junction Temperature          | 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.

## ELECTRICAL CHARACTERISTICS

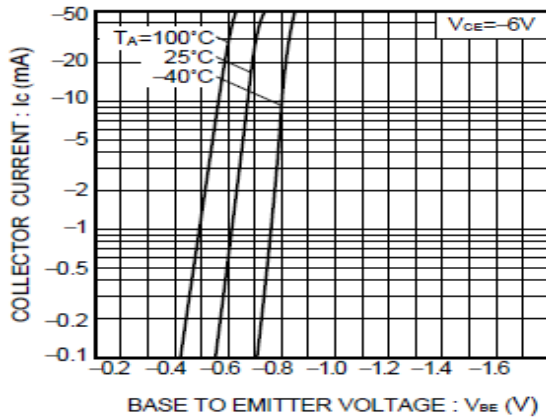
$T_A = 25^\circ\text{C}$

| Parameter                            | Symbol               | Characteristic                                         |   | Min. | Typ. | Max. | Unit |
|--------------------------------------|----------------------|--------------------------------------------------------|---|------|------|------|------|
| Collector-Base Breakdown Voltage     | BV <sub>CBO</sub>    | I <sub>C</sub> =-50μA                                  |   | -60  | -    | -    | V    |
| Collector-Emitter Breakdown Voltage  | BV <sub>CEO</sub>    | I <sub>C</sub> =-1μA                                   |   | -50  | -    | -    | V    |
| Emitter-Base Breakdown Voltage       | BV <sub>EBO</sub>    | I <sub>E</sub> =-50μA                                  |   | -6   | -    | -    | V    |
| Collector Cutoff Current             | I <sub>CBO</sub>     | V <sub>CB</sub> =-60V                                  |   | -    | -    | -0.1 | μA   |
| Emitter Cutoff Current               | I <sub>EBO</sub>     | V <sub>EB</sub> =-6V                                   |   | -    | -    | -0.1 | μA   |
| Collector-Emitter Saturation Voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> /I <sub>B</sub> =-50mA/-5mA             |   | -    | -    | -0.5 | V    |
| DC Current Transfer Ratio            | h <sub>FE</sub>      | V <sub>CE</sub> =-6V, I <sub>C</sub> = -1mA            | Q | 120  | -    | 270  | -    |
|                                      |                      |                                                        | R | 180  | -    | 390  |      |
|                                      |                      |                                                        | S | 270  | -    | 560  |      |
| Transition Frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =-12V, I <sub>E</sub> =2mA,<br>f=30MHz |   | -    | 140  | -    | MHz  |
| Output Capacitance                   | C <sub>ob</sub>      | V <sub>CB</sub> =-12V, I <sub>E</sub> =0A, f=1MHz      |   | -    | 4.0  | 5.0  | pF   |

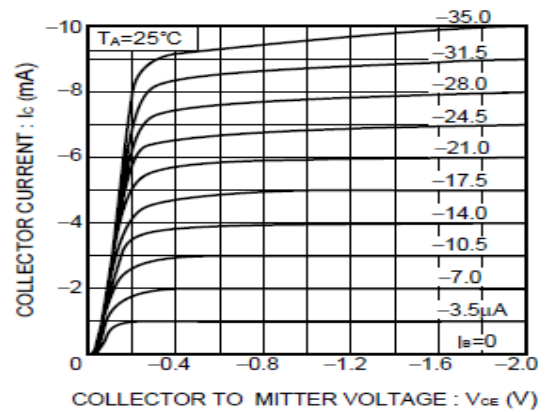


## TYPICAL CHARACTERISTICS

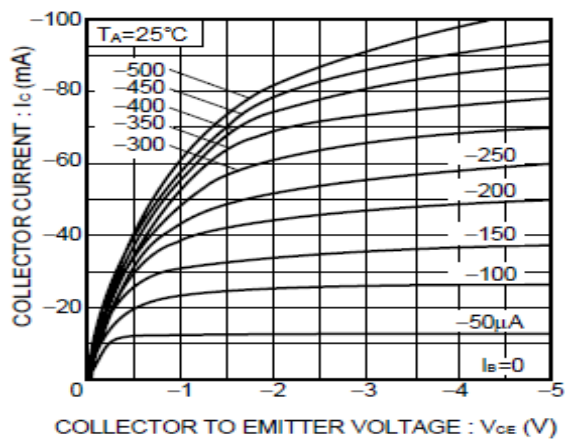
### 1. Grounded emitter propagation characteristics



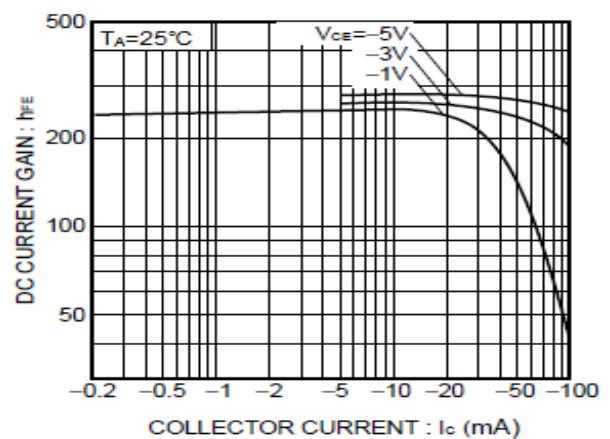
### 2. Grounded emitter output characteristics(I)



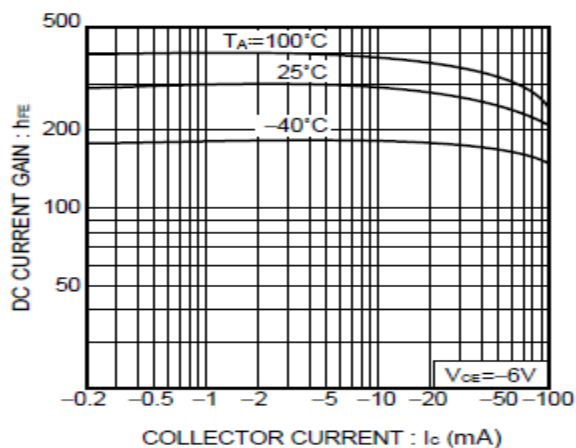
### 3. Grounded emitter output characteristics(II)



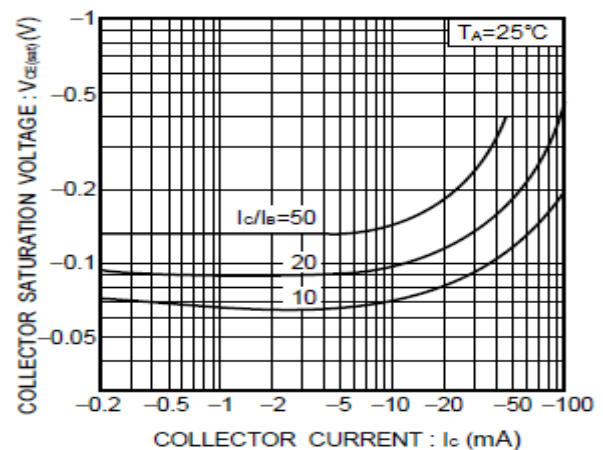
### 4. DC current gain vs. collector current (I)



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

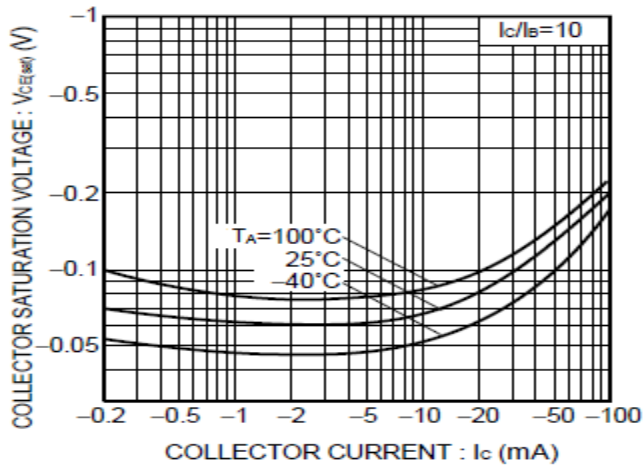


### 6. Collector-emitter saturation voltage vs. collector current (I)

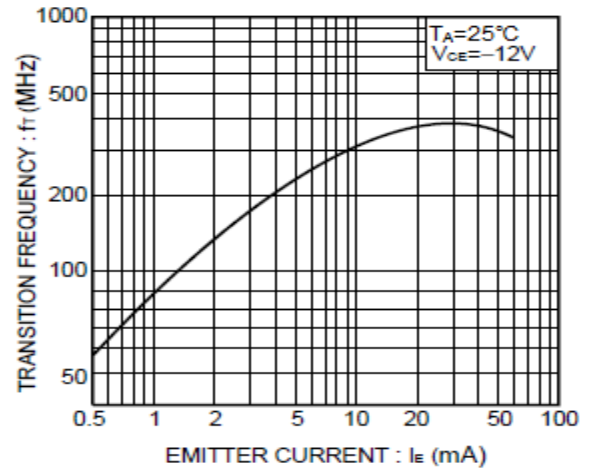




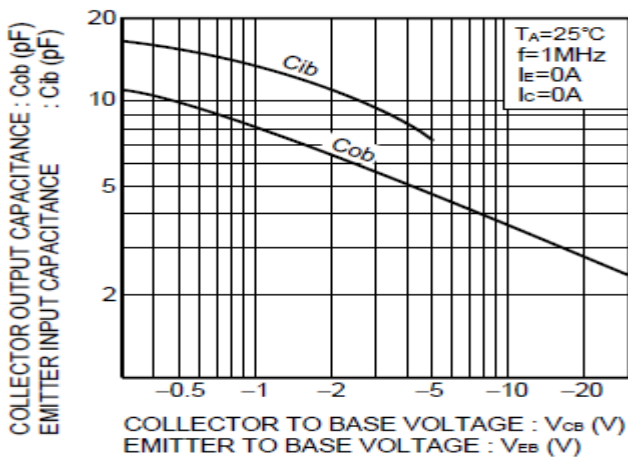
7. Collector-emitter saturation voltage vs.  
collector current (II)



8. Gain bandwidth product vs. emitter current



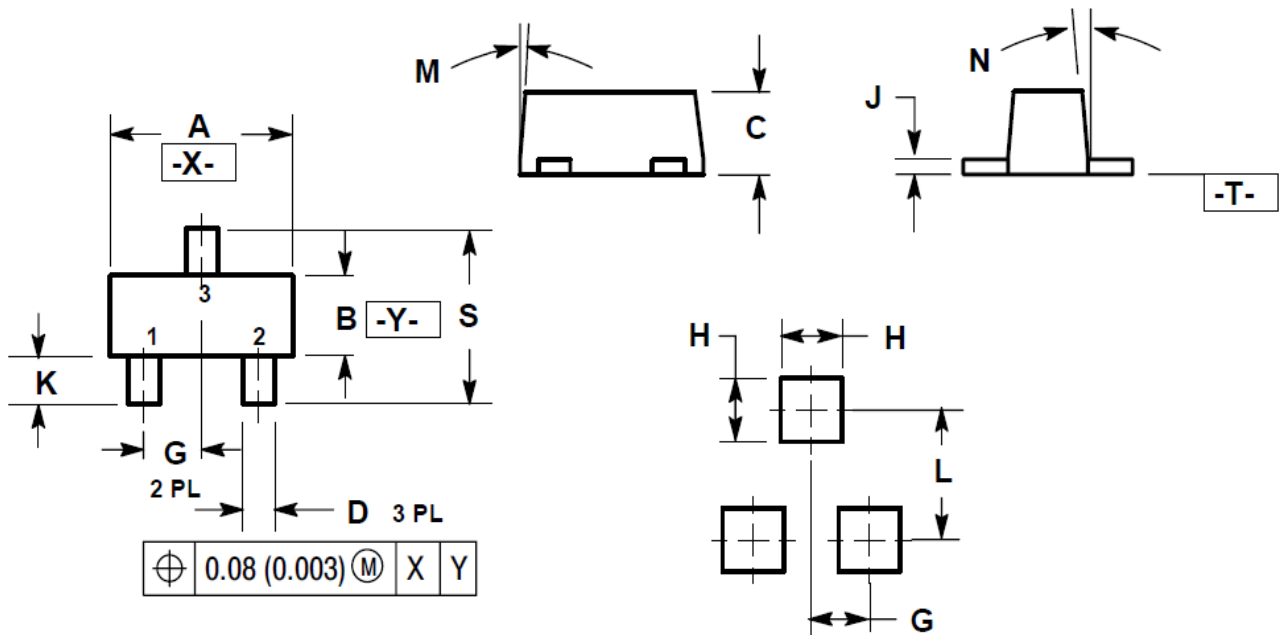
9. Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage





## PACKAGE INFORMATION

Dimension in SC-89 Package (Unit: mm)





## IMPORTANT NOTICE

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