

# 2SC1741AM

Rev.F Apr.-2017

## / Descriptions

SOT-23

NPN

Silicon NPN transistor in a SOT-23 Plastic Package.

## / Features

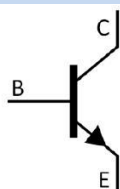
,  $V_{CE(sat)}$

High  $I_C$ , Low  $V_{CE(sat)}$

## / Applications

Medium power transistor.

## / Equivalent Circuit



## / Pinning



PIN1 Base

PIN 2 Emitter

PIN 3 Collector

## / $h_{FE}$ Classifications & Marking

|                                    |         |         |
|------------------------------------|---------|---------|
| $h_{FE}$ Classifications<br>Symbol | Q       | R       |
| $h_{FE}$ Range                     | 120~270 | 180~390 |
| Marking                            | H74Q    | H74R    |

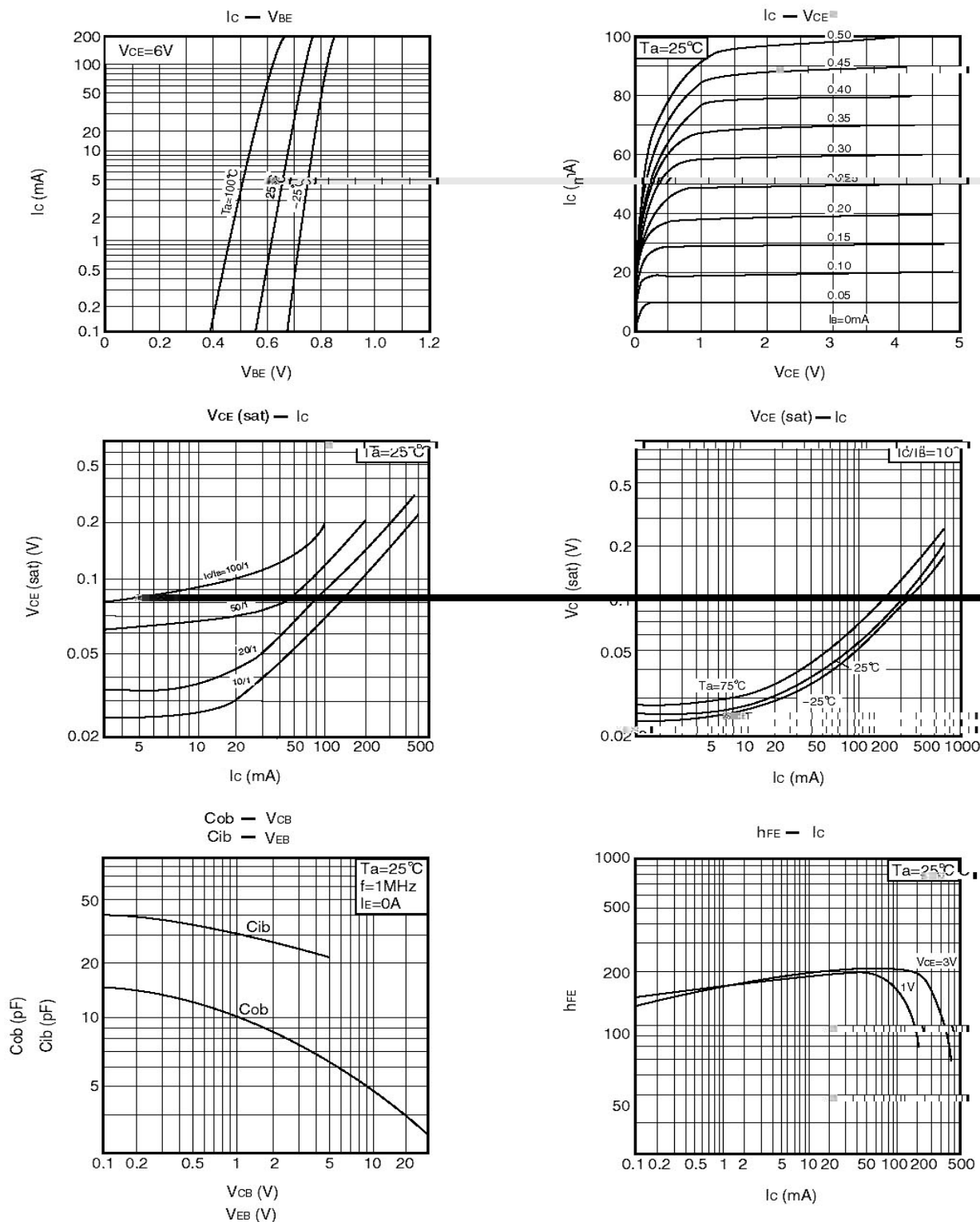
## / Absolute Maximum Ratings(Ta=25 )

| Parameter                    | Symbol    | Rating  | Unit |
|------------------------------|-----------|---------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 50      | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 50      | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 5.0     | V    |
| Collector Current            | $I_C$     | 0.5     | A    |
| Collector Power Dissipation  | $P_C$     | 0.3     | W    |
| Junction Temperature         | $T_j$     | 150     |      |
| Storage Temperature Range    | $T_{stg}$ | -55~150 |      |

## / Electrical Characteristics(Ta=25 )

| Parameter                               | Symbol        | Test Conditions                                          | Min | Typ | Max | Unit |
|-----------------------------------------|---------------|----------------------------------------------------------|-----|-----|-----|------|
| Collector-Base Breakdown voltage        | $V_{CBO}$     | $I_C=100\text{ A}$ $I_E=0$                               | 50  |     |     | V    |
| Collector-Emitter Breakdown Voltage     | $V_{CEO}$     | $I_C=1.0\text{mA}$ $I_B=0$                               | 50  |     |     | V    |
| Emitter-Base Breakdown Voltage          | $V_{EBO}$     | $I_E=100\text{ A}$ $I_C=0$                               | 5.0 |     |     | V    |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=30\text{V}$ $I_E=0$                              |     |     | 0.5 | A    |
| Emitter Base Cut-Off Current            | $I_{EBO}$     | $V_{EB}=4.0\text{V}$ $I_C=0$                             |     |     | 0.5 | A    |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=3.0\text{V}$ $I_C=0.1\text{A}$                   | 120 |     | 390 |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=150\text{mA}$ $I_B=15\text{mA}$                     |     |     | 0.4 | V    |
| Transition Frequency                    | $f_T$         | $V_{CE}=5.0\text{V}$ $f=100\text{MHz}$ $I_E=20\text{mA}$ |     | 250 |     | MHz  |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=10\text{V}$ $f=1.0\text{MHz}$ $I_E=0$            |     | 6.5 |     | pF   |

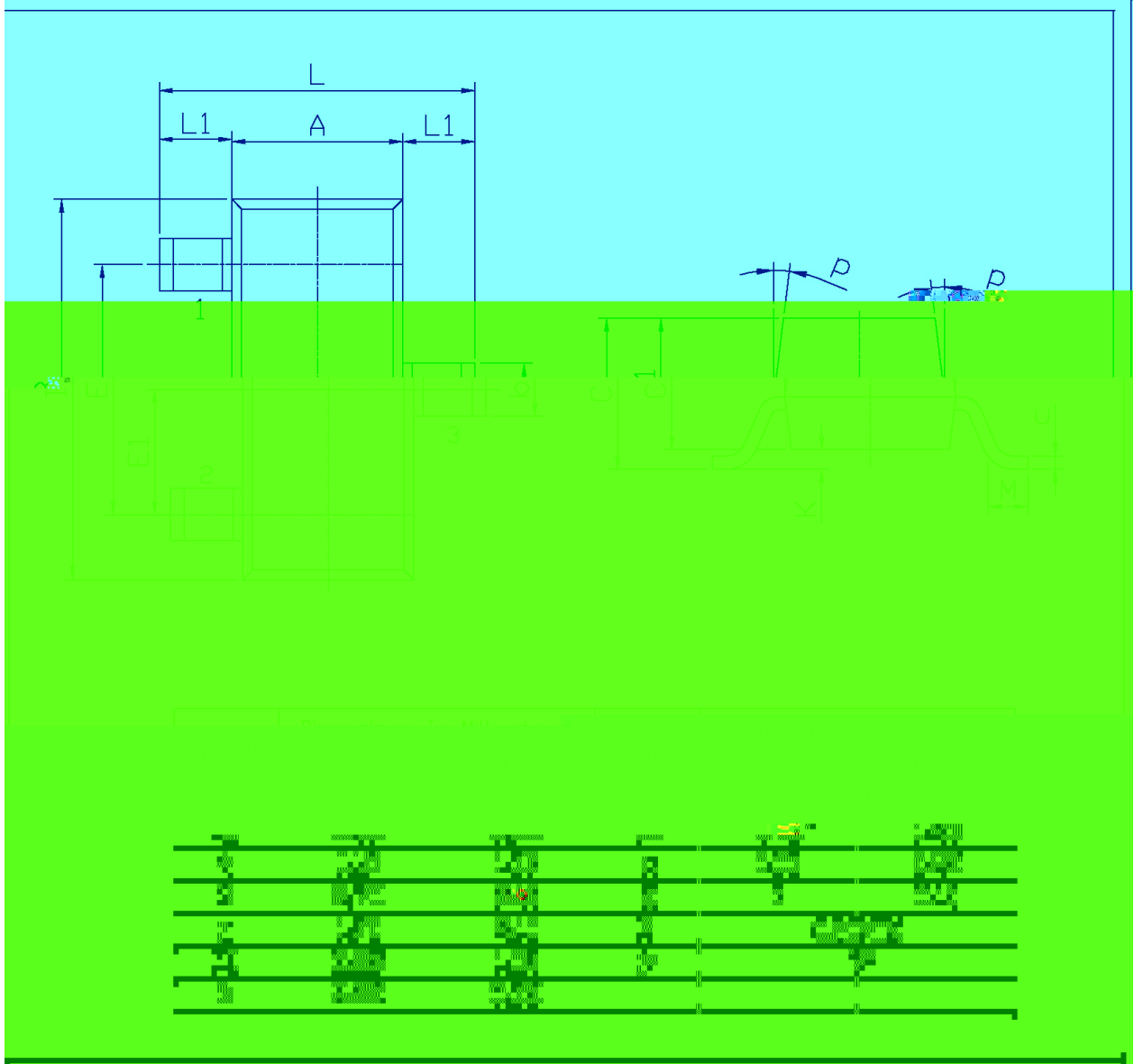
/ Electrical Characteristic Curve



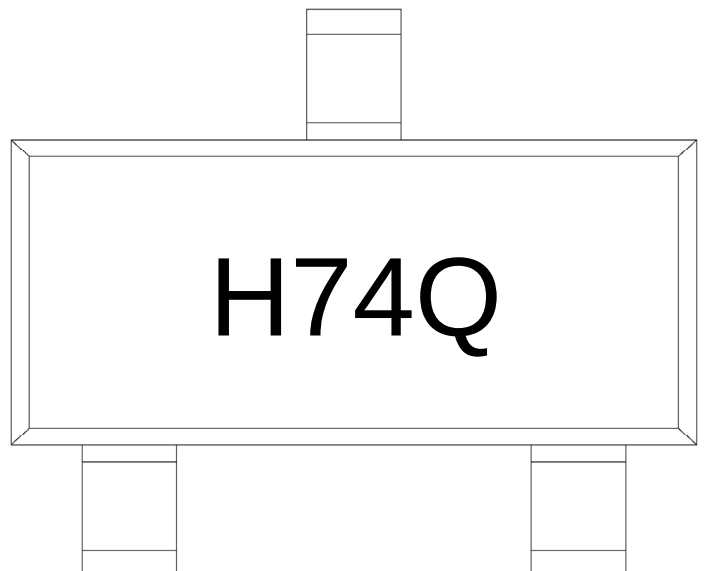
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

74

Q

$h_{FE}$

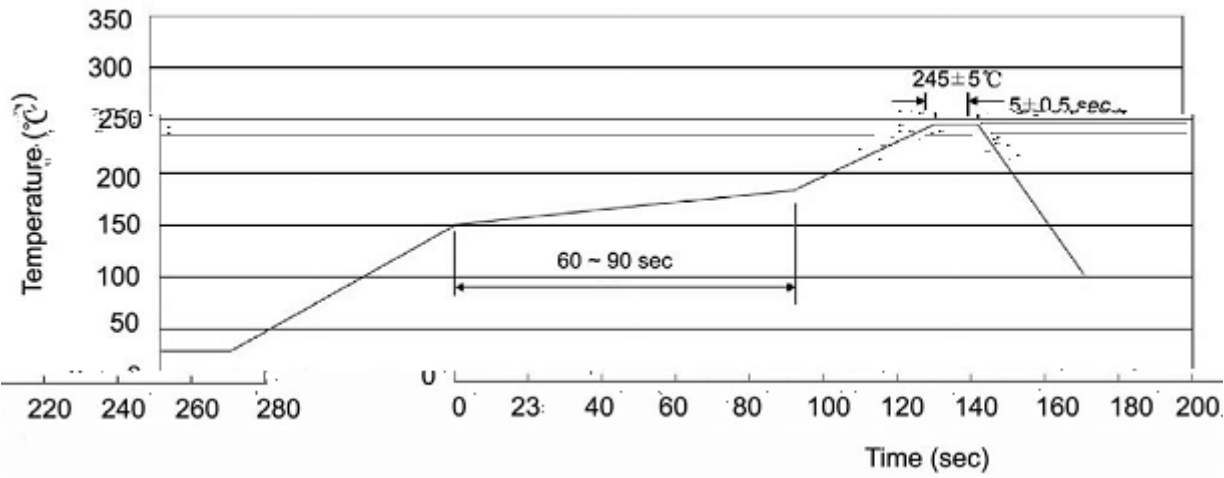
Note:

H: Company Code

74: Product Type Code

Q:  $h_{FE}$  Classifications Symbol Code

(     ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |       |     |    |           |                                         |
|---|-------|-----|----|-----------|-----------------------------------------|
| 1 | 25    | 150 | 60 | 90sec;    | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5 |     |    | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |       | 2   | 10 | /sec.     | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Units                      Dimension                      (unit mm