



# HM965

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HM965 is designed for use as AF output amplifier and glash unit.

## Features

- Low VCE(sat)
- High performance at low supply voltage

## Absolute Maximum Ratings

- Maximum Temperatures  
Storage Temperature ..... -55 ~ +150 °C  
Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C) ..... 1.2 W
- Maximum Voltages and Currents (Ta=25°C)  
BVCBO Collector to Base Voltage ..... 40 V  
BVCEO Collector to Emitter Voltage ..... 20 V  
BVEBO Emitter to Base Voltage ..... 7 V  
IC Collector Current (Continuous) ..... 5 A  
IC Collector Current (Peak PT=10mS) ..... 8 A

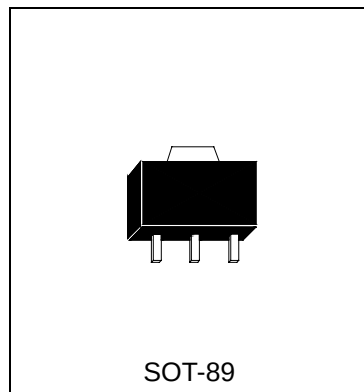
## Characteristics (Ta=25°C)

| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|-----------------|
| BVCBO     | 40   | -    | -    | V    | IC=100uA        |
| BVCEO     | 20   | -    | -    | V    | IC=1mA          |
| BVEBO     | 7    | -    | -    | V    | IE=10uA         |
| ICBO      | -    | -    | 0.1  | uA   | VCB=10V         |
| IEBO      | -    | -    | 0.1  | uA   | VEB=7V          |
| *VCE(sat) | -    | 0.35 | 1    | V    | IC=3A, IB=0.1A  |
| *hFE1     | 340  | -    | 800  |      | VCE=2V, IC=0.5A |
| *hFE2     | 150  | -    | -    |      | VCE=2V, IC=2A   |
| fT        | -    | 150  | -    | MHz  | VCE=6V, IE=50mA |
| Cob       | -    | -    | 50   | pF   | VCB=20V, f=1MHz |

\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

## Classifications Of hFE1

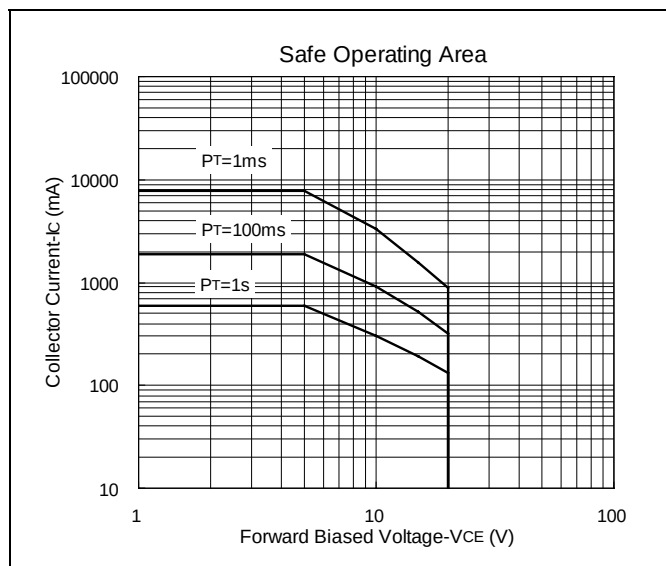
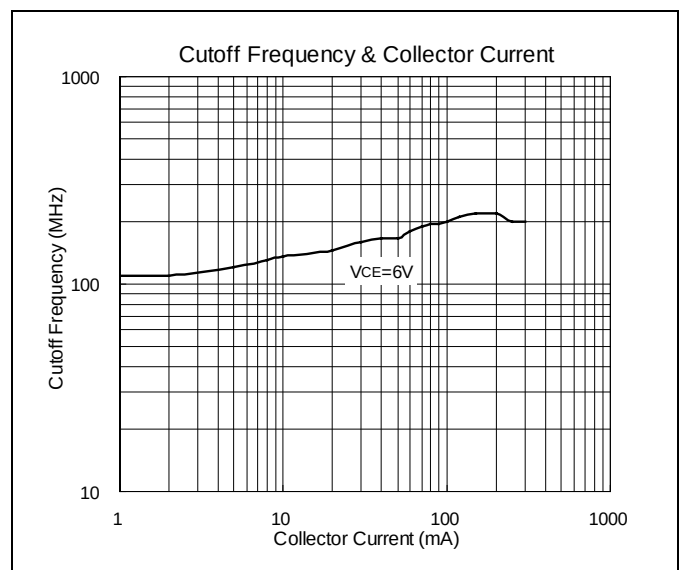
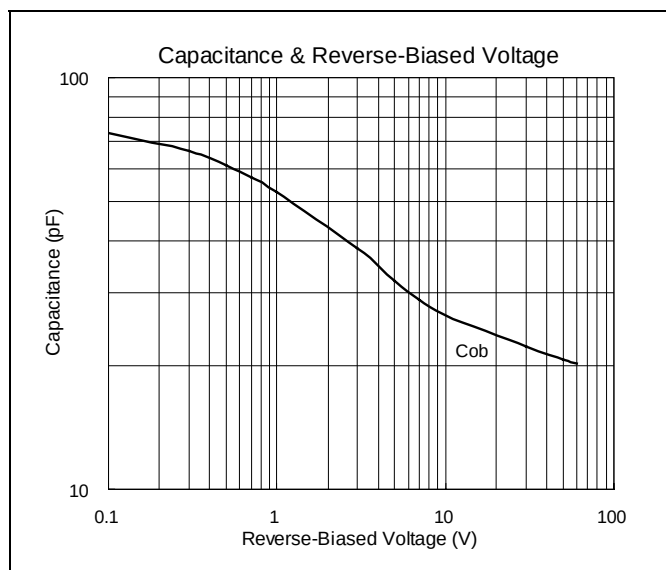
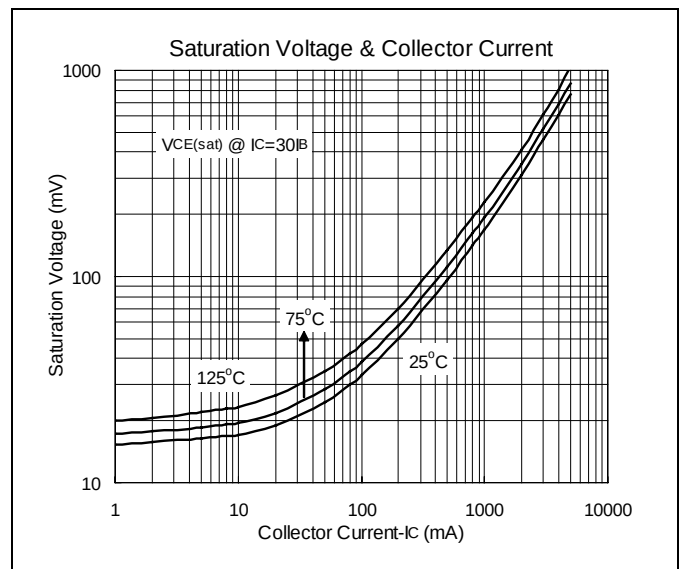
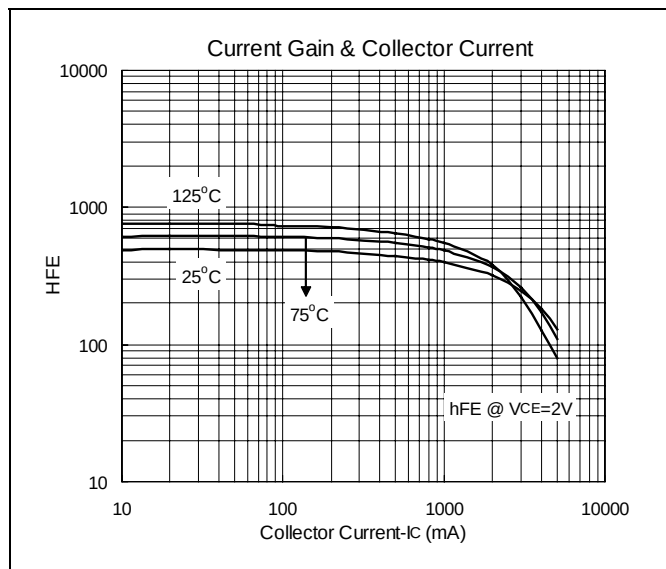
| Rank  | R       | S       |
|-------|---------|---------|
| Range | 340-600 | 560-800 |



SOT-89

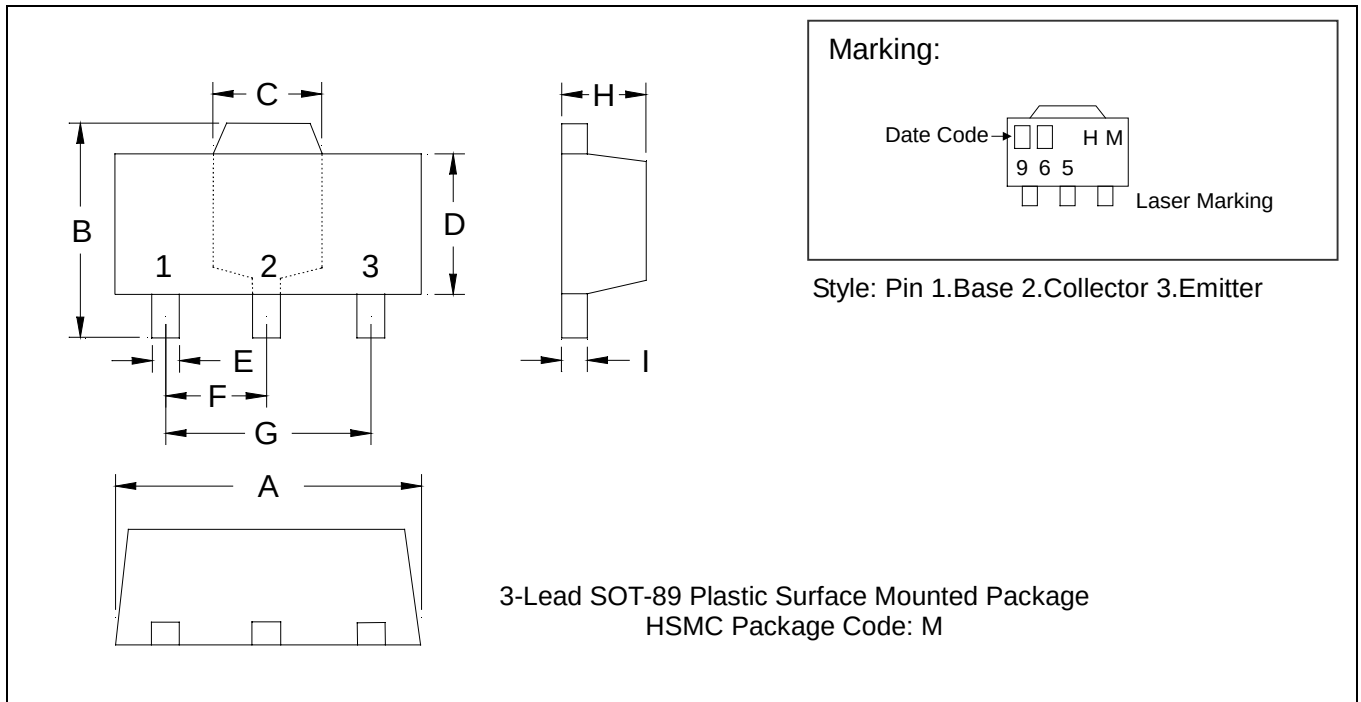


### Characteristics Curve





### SOT-89 Dimension



\*: Typical

| DIM | Inches |        | Millimeters |      | DIM | Inches |        | Millimeters |      |
|-----|--------|--------|-------------|------|-----|--------|--------|-------------|------|
|     | Min.   | Max.   | Min.        | Max. |     | Min.   | Max.   | Min.        | Max. |
| A   | 0.1732 | 0.1811 | 4.40        | 4.60 | F   | 0.0583 | 0.0598 | 1.48        | 1.52 |
| B   | 0.1594 | 0.1673 | 4.05        | 4.25 | G   | 0.1165 | 0.1197 | 2.96        | 3.04 |
| C   | 0.0591 | 0.0663 | 1.50        | 1.70 | H   | 0.0551 | 0.0630 | 1.40        | 1.60 |
| D   | 0.0945 | 0.1024 | 2.40        | 2.60 | I   | 0.0138 | 0.0161 | 0.35        | 0.41 |
| E   | 0.0141 | 0.0201 | 0.36        | 0.51 |     |        |        |             |      |

Notes: 1.Dimension and tolerance based on our Spec. dated May. 05,1996.

2.Controlling dimension: millimeters.

3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.

4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

#### Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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