

## GMBCP56 NPN SILICON EPITAXIAL TRANSISTOR

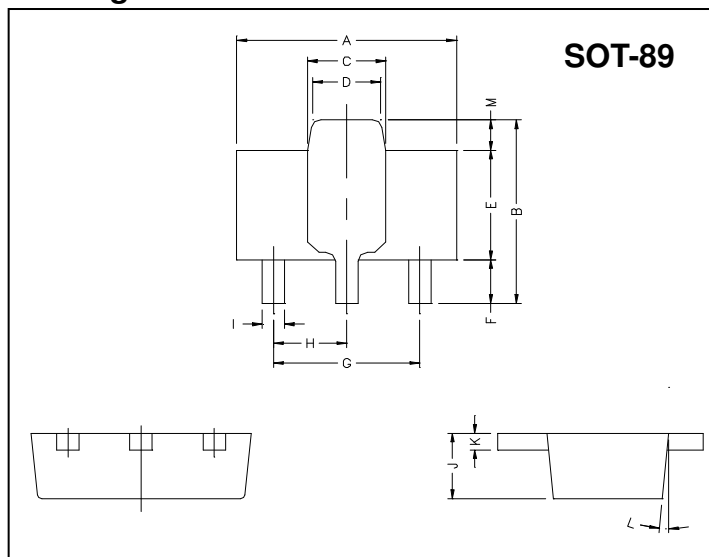
### Description

The GMBCP56 is designed for use in audio amplifiers and medium power amplifications.

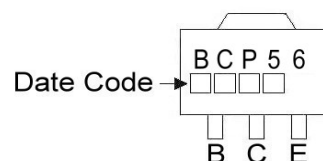
### Features

- Collector-Emitter Voltage:  $V_{CE0}=80V$
- Complementary to GMBCX53

### Package Dimensions



### Marking :



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 4.4        | 4.6  | G    | 3.00       | REF. |
| B    | 4.05       | 4.25 | H    | 1.50       | REF. |
| C    | 1.50       | 1.70 | I    | 0.40       | 0.52 |
| D    | 1.30       | 1.50 | J    | 1.40       | 1.60 |
| E    | 2.40       | 2.60 | K    | 0.35       | 0.41 |
| F    | 0.89       | 1.20 | L    | 5° TYP.    |      |
|      |            |      | M    | 0.70 REF.  |      |

### Absolute Maximum Ratings at $T_a = 25^{\circ}C$

| Parameter                    | Symbol    | Ratings    | Unit        |
|------------------------------|-----------|------------|-------------|
| Junction Temperature         | $T_j$     | +150       | $^{\circ}C$ |
| Storage Temperature Range    | $T_{STG}$ | -65 ~ +150 | $^{\circ}C$ |
| Collector to Base Voltage    | $V_{CBO}$ | 100        | V           |
| Collector to Emitter Voltage | $V_{CEO}$ | 80         | V           |
| Emitter to Base Voltage      | $V_{EBO}$ | 5          | V           |
| Collect Current(DC)          | $I_C$     | 1          | A           |
| Total Power Dissipation      | $P_D$     | 1.2        | W           |

### Electrical Characteristics ( $T_a = 25^{\circ}C$ )

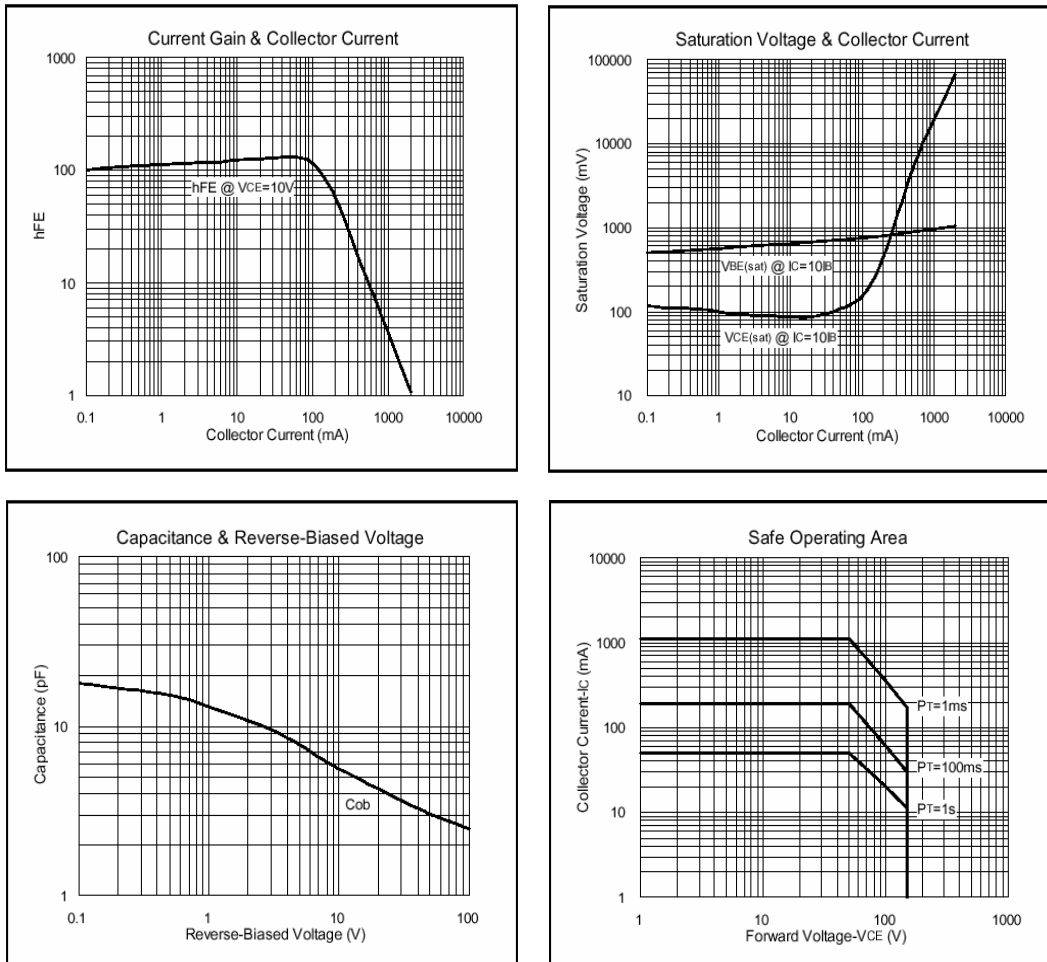
| Symbol           | Min. | Typ. | Max. | Unit | Test Conditions         |
|------------------|------|------|------|------|-------------------------|
| $V_{CBO}$        | 100  | -    | -    | V    | $I_C=100\mu A, I_E=0$   |
| $V_{CEO}$        | 80   | -    | -    | V    | $I_C=1mA, I_B=0$        |
| $V_{EBO}$        | 5    | -    | -    | V    | $I_E=10\mu A, I_C=0$    |
| $I_{CBO}$        | -    | -    | 100  | nA   | $V_{CB}=30V, I_E=0$     |
| $I_{EBO}$        | -    | -    | 100  | nA   | $V_{EB}=5V, I_C=0$      |
| * $V_{CE(sat)1}$ | -    | -    | 500  | mV   | $I_C=500mA, I_B=50mA$   |
| * $V_{BE(on)}$   | -    | -    | 1000 | mV   | $I_C=500mA, V_{CE}=2V,$ |
| * $h_{FE1}$      | 63   | -    | -    |      | $V_{CE}=2V, I_C=5mA$    |
| * $h_{FE2}$      | 63   | -    | 250  |      | $V_{CE}=2V, I_C=150mA$  |
| * $h_{FE3}$      | 40   | -    | -    |      | $V_{CE}=2V, I_C=500mA$  |
| fT               | 100  | -    | -    | MHz  | $V_{CE}=5V, I_C=10mA$   |

\* Pulse Test: Pulse Width  $\leq 380\mu s$ , Duty Cycle  $\leq 2\%$

### Classification Of $h_{FE2}$

| Rank  | 10       | 16        |
|-------|----------|-----------|
| Range | 63 - 160 | 100 - 250 |

## Characteristics Curve



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