

## SSTA56 / MMSTA56 / MPSA56

## Transistors

## PNP General Purpose Transistor

## SSTA56 / MMSTA56 / MPSA56

## ●Features

- 1)  $BV_{CEO} < -40V$  ( $I_C = -1mA$ )
- 2) Complements the SSTA06 / MMSTA06 / MPSA06.

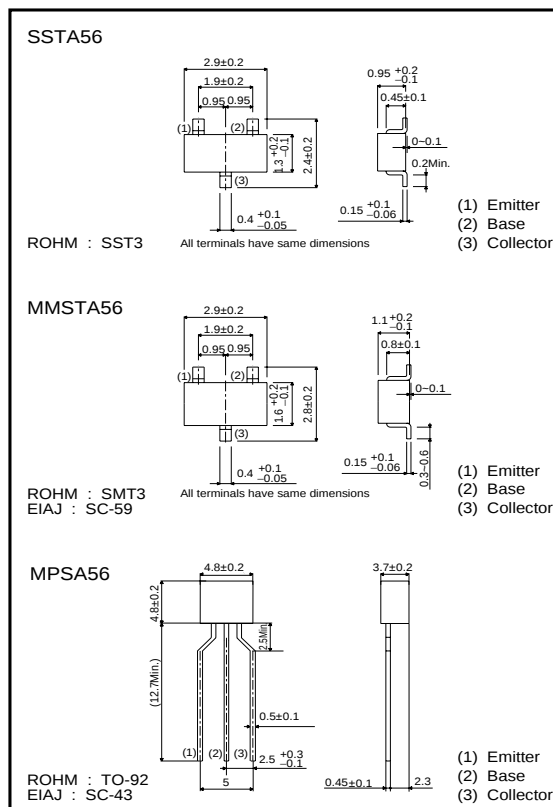
## ●Package, marking and packaging specifications

| Part No.                     | SSTA56 | MMSTA56 | MPSA56 |
|------------------------------|--------|---------|--------|
| Packaging type               | SST3   | SMT3    | TO-92  |
| Marking                      | R2G    | R2G     | -      |
| Code                         | T116   | T146    | T93    |
| Basic ordering unit (pieces) | 3000   | 3000    | 3000   |

●Absolute maximum ratings ( $T_a = 25^\circ C$ )

| Parameter                   | Symbol    | Limits   | Unit       |
|-----------------------------|-----------|----------|------------|
| Collector-base voltage      | $V_{CBO}$ | -80      | V          |
| Collector-emitter voltage   | $V_{CEO}$ | -80      | V          |
| Emitter-base voltage        | $V_{EBO}$ | -4       | V          |
| Collector current           | $I_C$     | -0.5     | A          |
| Collector power dissipation | $P_C$     | 0.2      | W          |
|                             |           | 0.625    |            |
| Junction temperature        | $T_j$     | 150      | $^\circ C$ |
| Storage temperature         | $T_{stg}$ | -55~+150 | $^\circ C$ |

## ●External dimensions (Units : mm)

●Electrical characteristics ( $T_a = 25^\circ C$ )

| Parameter                            | Symbol        | Min. | Typ. | Max.  | Unit    | Conditions                              |
|--------------------------------------|---------------|------|------|-------|---------|-----------------------------------------|
| Collector-base breakdown voltage     | $BV_{CBO}$    | -4   | -    | -     | V       | $I_C = -100\mu A$                       |
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | -80  | -    | -     | V       | $I_C = -1mA$                            |
| Collector cutoff current             | $I_{CBO}$     | -    | -    | -0.1  | $\mu A$ | $V_{CB} = -80V$                         |
|                                      | $I_{CEO}$     | -    | -    | -1    |         | $V_{CE} = -60V$                         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | -    | -    | -0.25 | V       | $I_C/I_B = -100mA/-10mA$                |
| Base-emitter saturation voltage      | $V_{BE(on)}$  | -    | -    | -1.2  | V       | $V_{CE}/I_B = -1V/-100mA$               |
| DC current transfer ratio            | $h_{FE}$      | 100  | -    | -     | -       | $V_{CE} = -1V, I_C = -10mA$             |
|                                      |               | 100  | -    | -     |         | $V_{CE} = -1V, I_C = -100mA$            |
| Transition frequency                 | $f_T$         | 50   | -    | -     | MHz     | $V_{CE} = -1V, I_E = 100mA, f = 100MHz$ |

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## ● Electrical characteristic curves

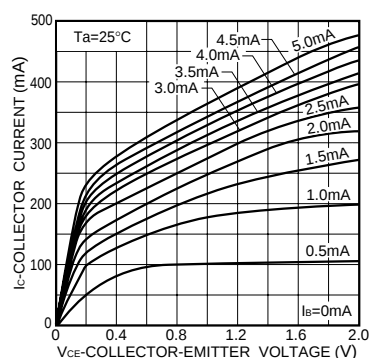


Fig.1 Grounded emitter output characteristics

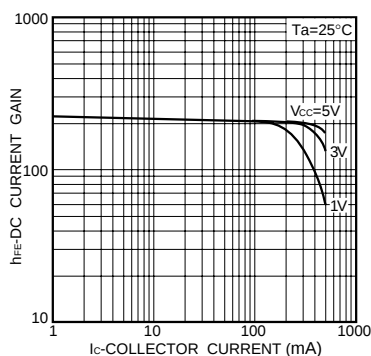


Fig.2 DC current gain vs. collector current ( I )

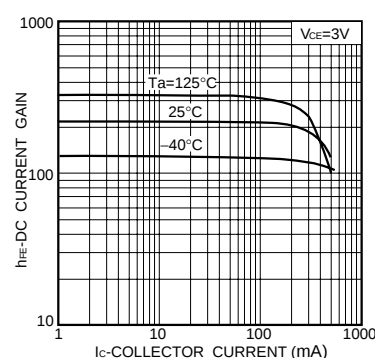


Fig.3 DC current gain vs. collector current ( II )

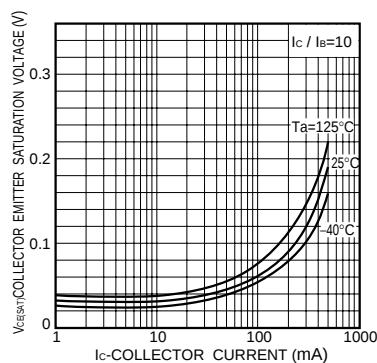


Fig.4 Collector emitter saturation voltage vs. collector current

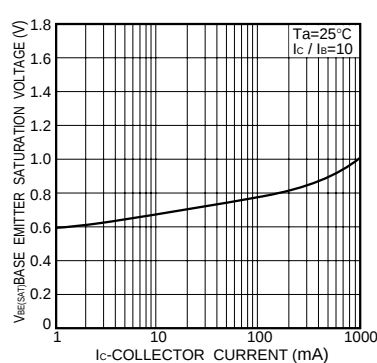


Fig.5 Base-emitter saturation voltage vs. collector current

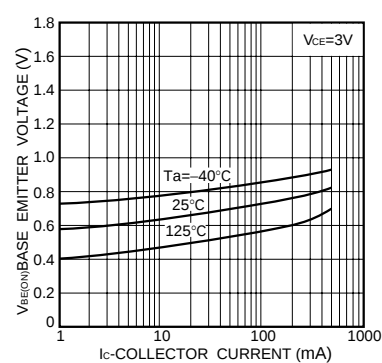


Fig.6 Grounded emitter propagation characteristics

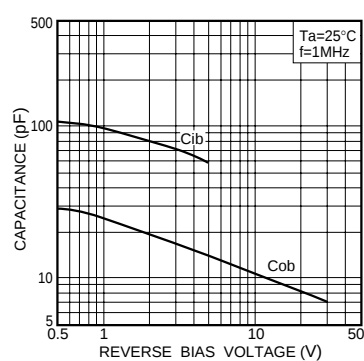


Fig.7 Input/output capacitance vs. voltage

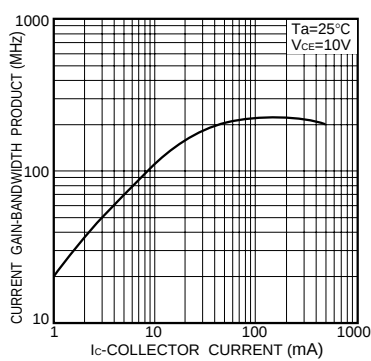


Fig.8 Gain bandwidth product vs. collector current