

NPN General Purpose Transistor

SSTA06 / MMSTA06 / MPSA06

●Features

- 1) $V_{CE0} < 80V.$ ($I_C=1mA$)
- 2) Complements the SSTA56 / MMSTA56 / MPSA56.

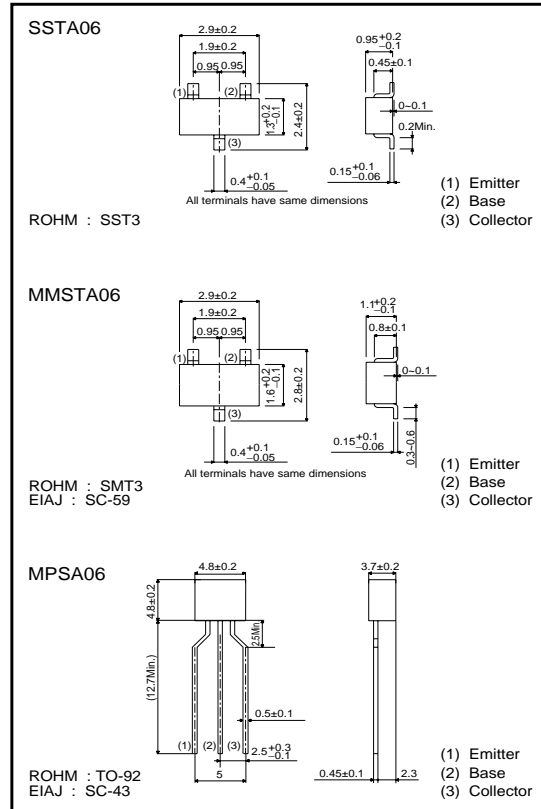
●Package, marking and packaging specifications

| Part No. | SSTA06 | MMSTA06 | MPSA06 |
|------------------------------|--------|---------|--------|
| Packaging type | SST3 | SMT3 | TO-92 |
| Mark | R1G | R1G | - |
| 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_{CB0} | 80 | V |
| Collector-emitter voltage | V_{CE0} | 80 | V |
| Emitter-base voltage | V_{EB0} | 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 | μA | $V_{CB}=80V$ |
| | 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 | 100 | - | - | MHz | $V_{CE}=2V, I_E=-10mA, f=100MHz$ |

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●Electrical characteristics curves

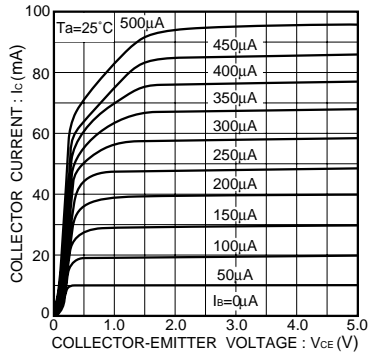


Fig.1 Grounded emitter output characteristics

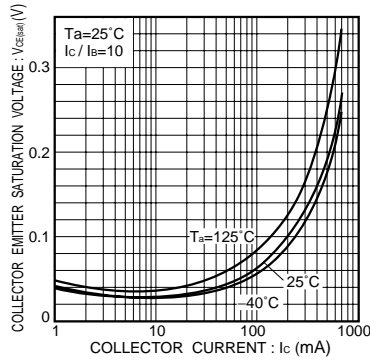


Fig.2 Collector-emitter saturation voltage vs. collector current

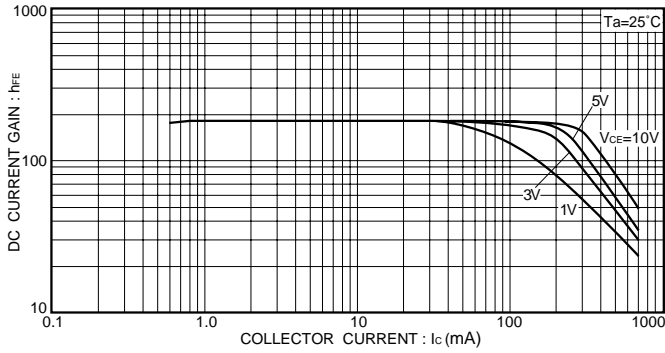


Fig.3 DC current gain vs. collector current (I)

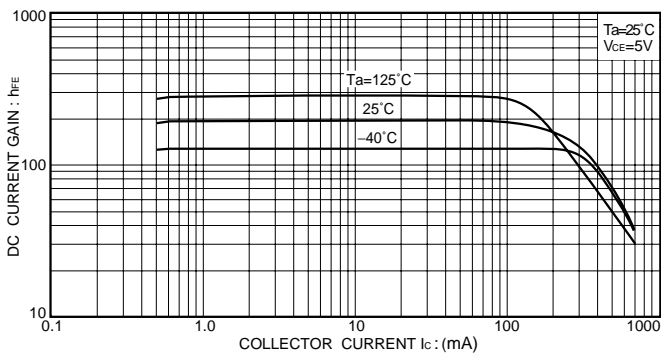


Fig.4 DC current gain vs. collector current (II)

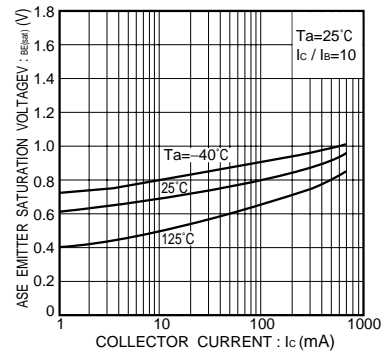


Fig.5 Base-emitter saturation voltage vs. collector current

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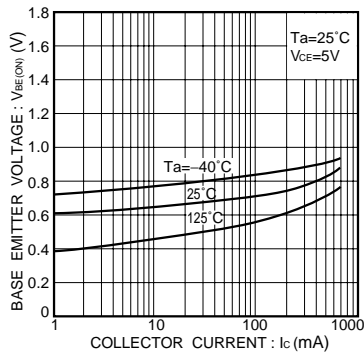


Fig.6 Grounded emitter propagation characteristics

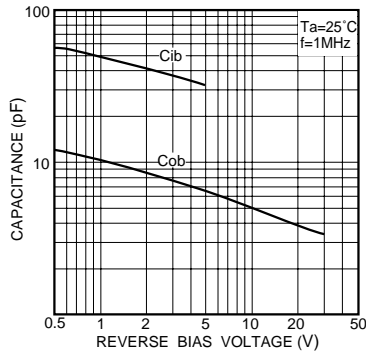


Fig.7 Input / output capacitance vs. voltage

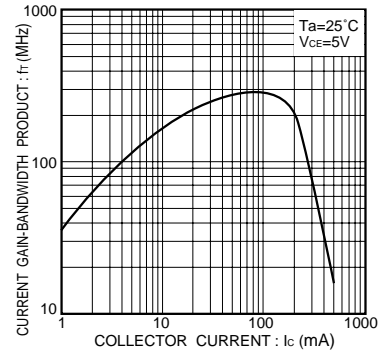


Fig.8 Gain bandwidth product vs. collector current