

MPSA06

NPN Small Signal Transistor 625 mW

Features

- Halogen free available upon request by adding suffix "-HF"
- NPN Silicon Epitaxial Planar Transistor for switching and amplifier applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- As complementary type, the PNP transistor is MPSA56
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Mechanical Data

- Marking: MPSA06
- Weight: 0.18 grams (Approx.)

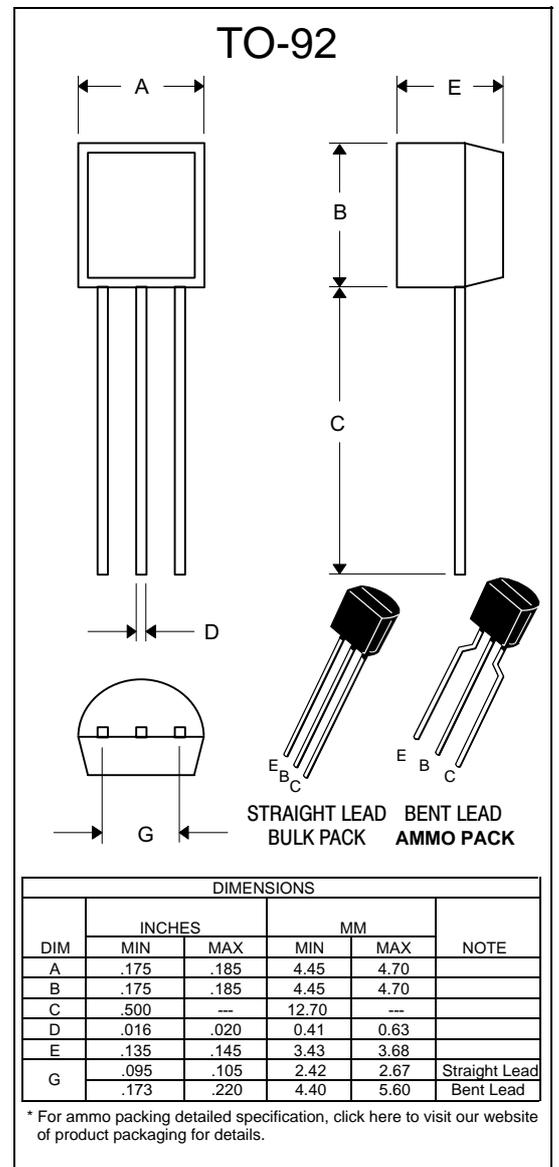
Maximum Ratings @ 25°C Unless Otherwise Specified

| Characteristic | Symbol | Value | Unit |
|--|-----------------|------------|--------------------|
| Collector to Base Voltage | V_{CBO} | 80 | V |
| Collector to Emitter Voltage | V_{CEO} | 80 | V |
| Emitter to Base Voltage | V_{EBO} | 4.0 | V |
| Collector Current | I_C | 500 | mA |
| Total Power Dissipation @ $T_A=25^\circ\text{C}$ | P_{tot} | 625 | mW |
| Total Power Dissipation @ $T_C=25^\circ\text{C}$ | P_{tot} | 1.5 | W |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 200 | $^\circ\text{C/W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 to 150 | $^\circ\text{C}$ |

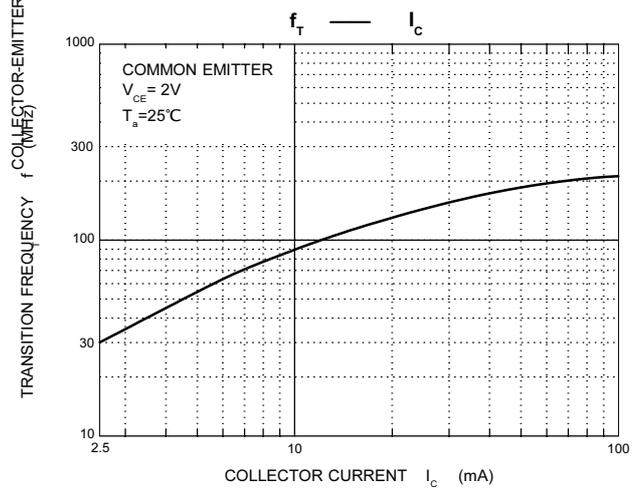
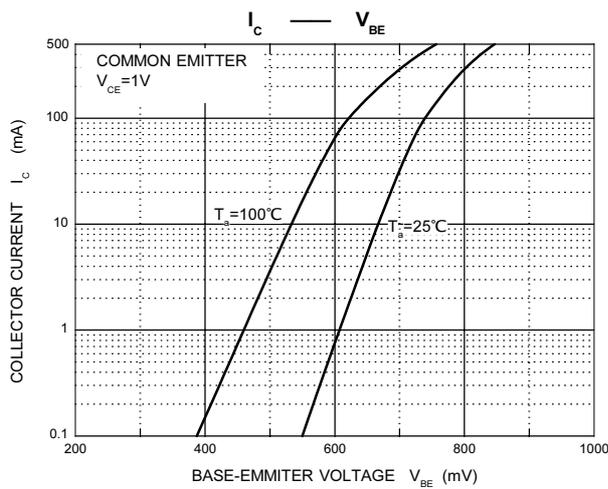
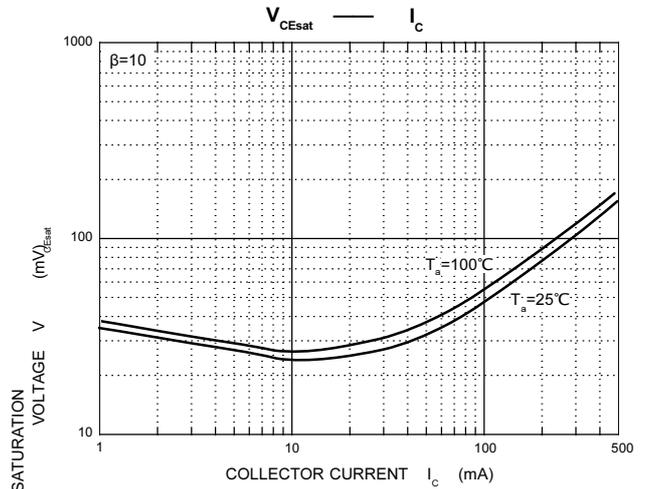
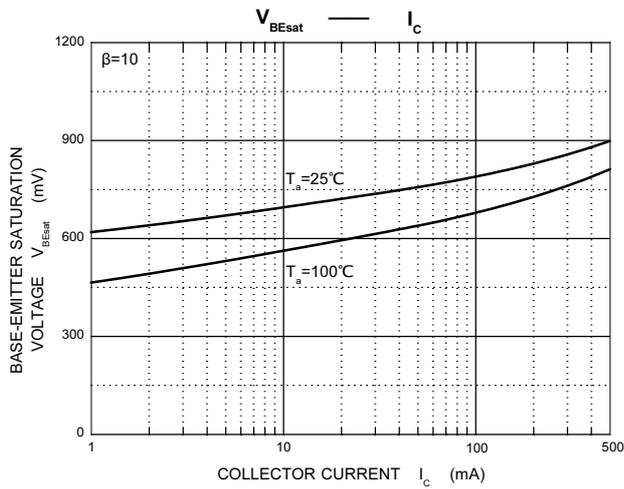
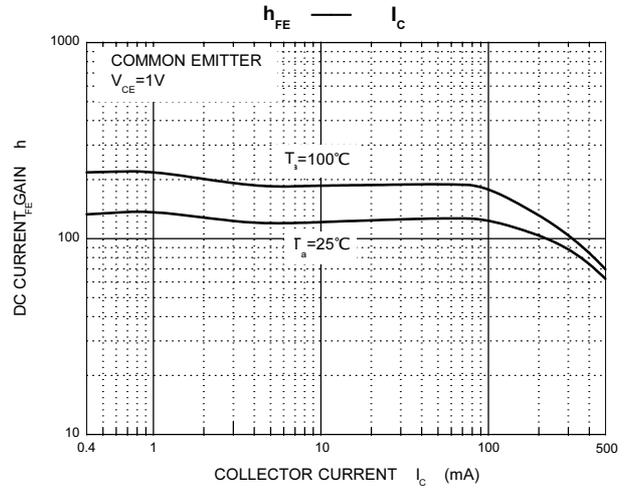
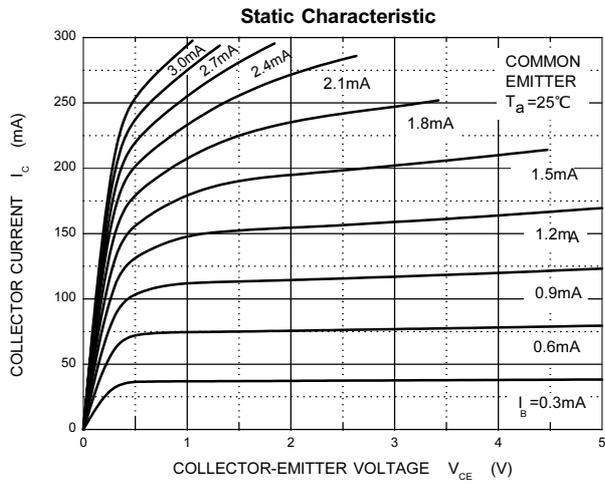
Electrical Characteristics @ 25°C Unless Otherwise Specified

| Characteristic | Symbol | Min | Max | Unit | Test Cond. |
|---|---------------|-----|------|------|---|
| Collector Cut-off Current | I_{CBO} | | 100 | nA | $V_{CB}=80\text{V}, I_E=0$ |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | | 0.25 | V | $I_C=100\text{mA}, I_B=10\text{mA}$ |
| DC Current Gain | h_{FE} | 100 | 400 | | $V_{CE}=1\text{V}, I_C=10\text{mA}$ $V_{CE}=1\text{V}, I_C=100\text{mA}$ |
| Gain Bandwidth Product | f_T | 100 | | MHZ | $V_{CE}=2\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 80 | | V | $I_C=1\text{mA}, I_B=0$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 4 | | V | $I_E=100\mu\text{A}, I_C=0$ |
| Base-Emitter ON Voltage | $V_{BE(sat)}$ | | 1.2 | V | $I_C=100\text{mA}, I_B=10\text{mA}$ |

Note: Valid provided that leads are kept at ambient temperature.



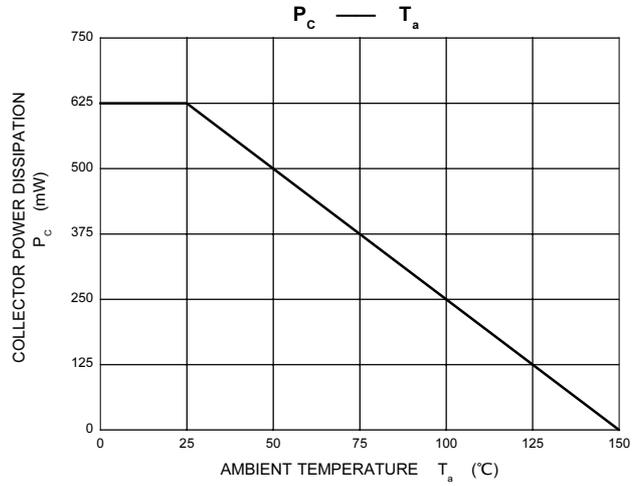
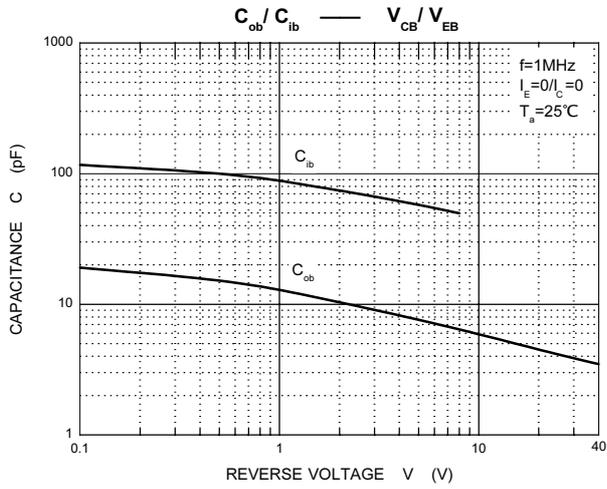
Typical Characteristics



C_{ob}/C_{ib} — V_{CB}/V_{EB}

P_C — T_a

Typical Characteristics





Ordering Information :

| Device | Packing |
|----------------|-----------------------------|
| Part Number-AP | Ammo Packing: 20Kpcs/Carton |
| Part Number-BP | Bulk: 100Kpcs/Carton |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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