



PRODUCT DATA SHEET

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Datasheet



Resources





Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

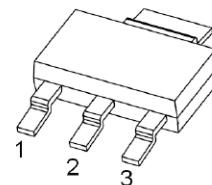
FEATURES

Power dissipation

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------------------------|---|---------|------|
| V _{CBO} | Collector-Base Voltage | 50 | V |
| V _{CEO} | Collector-Emitter Voltage | 40 | V |
| V _{EBO} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current -Continuous | 3 | A |
| P _C | Collector Power Dissipation | 0.5 | W |
| R _{θJA} | Thermal Resistance from  Junction to Ambient | Å25€ | °C/W |
| R _{θJC} | Thermal Resistance from  Junction to Case | Å35 | °C/W |
| T _J , T _{stg} | Operation Junction and Storage Temperature Range | -55~150 | °C |

SOT-223

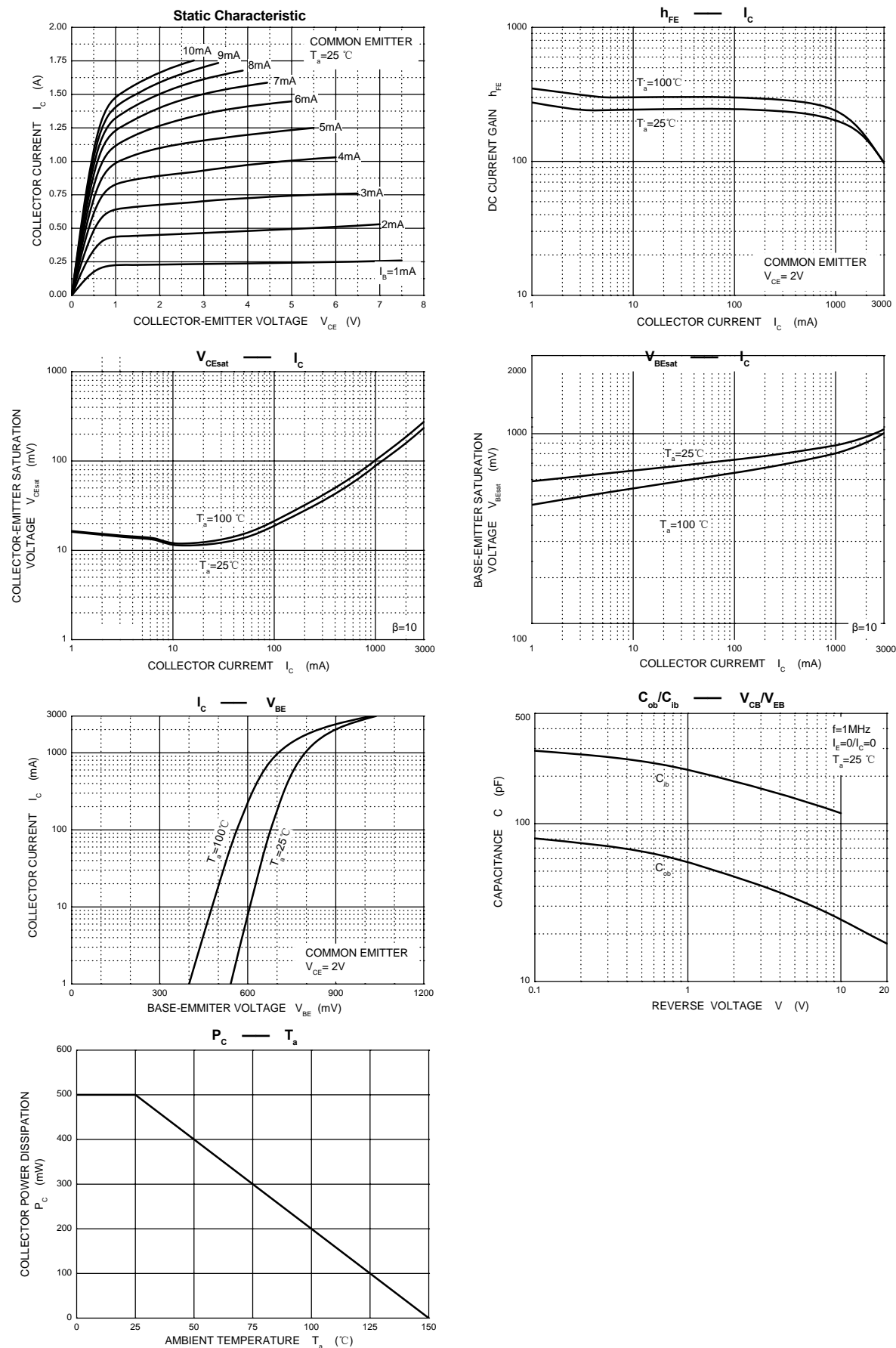


1. BA
2. C LECTOR
3. EMITT

ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

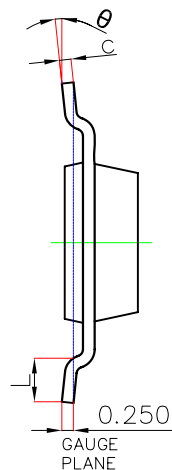
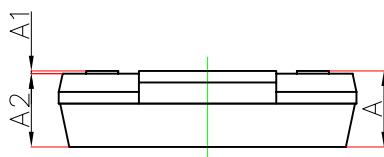
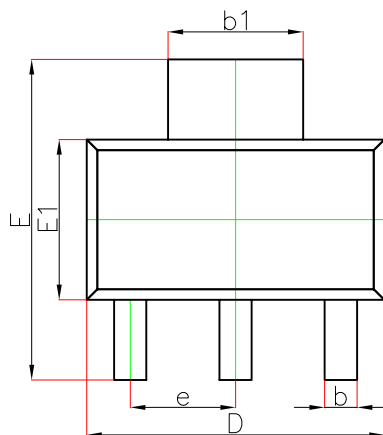
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 100μA, I _E =0 | 50 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 10mA, I _B =0 | 40 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E = 100μA, I _C =0 | 6 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} = 40V, I _E =0 | | | 1 | μA |
| Collector cut-off current | I _{CEO} | V _{CE} = 30V, I _B =0 | | | 10 | μA |
| Emitter cut-off current | I _{EBO} | V _{EB} = 6V, I _C =0 | | | 1 | μA |
| DC current gain | h _{FE(1)} | V _{CE} =2V, I _C = 1A | 60 | | 400 | |
| | h _{FE(2)} | V _{CE} =2V, I _C = 100mA | 32 | | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 2A, I _B = 0.2 A | | | 0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 2A, I _B = 0.2 A | | | 1.5 | V |
| Transition frequency | f _T | V _{CE} = 5V , I _C =0.1A f =10MHz | 50 | | | MHz |

Typical Characteristics



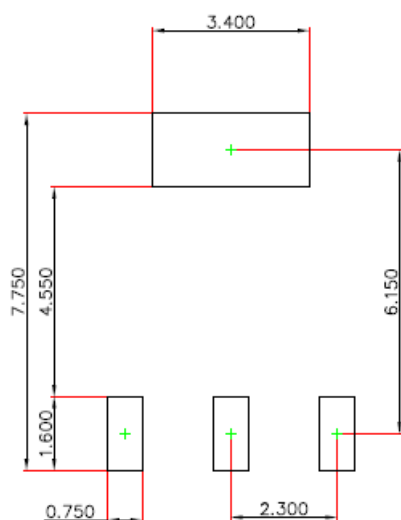
Ver.1.0

SOT-223 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | — | 1.800 | — | 0.071 |
| A1 | 0.020 | 0.100 | 0.001 | 0.004 |
| A2 | 1.500 | 1.700 | 0.059 | 0.067 |
| b | 0.660 | 0.840 | 0.026 | 0.033 |
| b1 | 2.900 | 3.100 | 0.114 | 0.122 |
| c | 0.230 | 0.350 | 0.009 | 0.014 |
| D | 6.300 | 6.700 | 0.248 | 0.264 |
| E | 6.700 | 7.300 | 0.264 | 0.287 |
| E1 | 3.300 | 3.700 | 0.130 | 0.146 |
| e | 2.300(BSC) | | 0.091(BSC) | |
| L | 0.750 | — | 0.030 | — |
| θ | 0° | 10° | 0° | 10° |

SOT-223 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

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