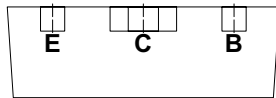
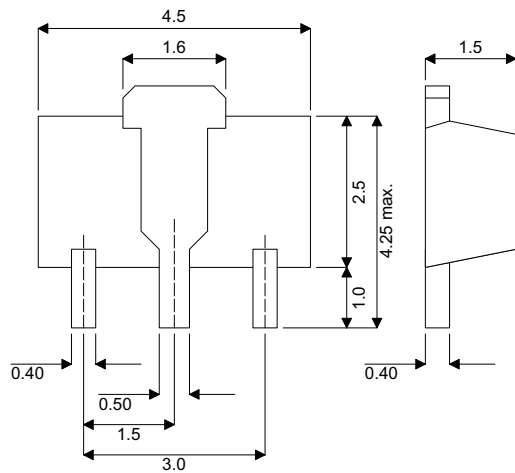


MECHANICAL DATA

Dimensions in mm



SOT89

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal for high current driver applications requiring low loss devices

FEATURES

- LOW $V_{CE(SAT)}$
- HIGH CURRENT
- HIGH ENERGY RATING

APPLICATIONS

- ANY HIGH CURRENT DRIVER APPLICATIONS REQUIRING EFFICIENT LOW LOSS DEVICES

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

| | | |
|-------------|---|--------------|
| V_{CEO} | Collector – Emitter voltage | 20V |
| V_{CBO} | Collector – Base voltage | 60V |
| V_{EBO} | Emitter – Base voltage | 6V |
| I_C | Collector current | 5A |
| $I_{C(PK)}$ | Peak Collector current | 8A |
| P_{tot} | Total Dissipation at $T_{case} = 25^{\circ}C$ | 0.9W |
| T_{stg} | Storage Temperature | -55 to 150°C |
| T_j | Maximum Operating Junction Temperature | 150°C |

ELECTRICAL CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit. |
|------------------------|---|--|------|------|---------------|
| I_{CBO} | Collector cut-off current $V_{\text{CB}} = 50\text{V}$ $I_{\text{E}} = 0$ | | | 1.0 | μA |
| I_{EBO} | Emitter cut-off current $V_{\text{EB}} = 5\text{V}$ $I_{\text{C}} = 0$ | | | 1.0 | μA |
| $V_{\text{CE(sat)}}^*$ | Collector – Emitter saturation voltage $I_{\text{C}} = 3\text{A}$ $I_{\text{B}} = 60\text{mA}$ | | | 0.5 | V |
| $V_{\text{BE(sat)}}^*$ | Base – Emitter saturation voltage $I_{\text{C}} = 3\text{A}$ $I_{\text{B}} = 60\text{mA}$ | 0.6 | | 1.5 | V |
| h_{FE}^* | DC current gain $V_{\text{CE}} = 2\text{V}$ $I_{\text{C}} = 0.5\text{A}$ | 100 | | 560 | — |
| | | $V_{\text{CE}} = 2\text{V}$ $I_{\text{C}} = 3\text{A}$ | 75 | | |
| f_{T} | Transition frequency $V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 50\text{mA}$ | | 120 | | MHz |
| C_{ob} | Output capacitance $V_{\text{CB}} = 10\text{V}$ $f = 1\text{MHz}$ | | 45 | | pF |

* Pulse test $t_{\text{p}} = 300\mu\text{s}$, $\delta \leq 2\%$