

Pb Free Plating Product

E13005-250

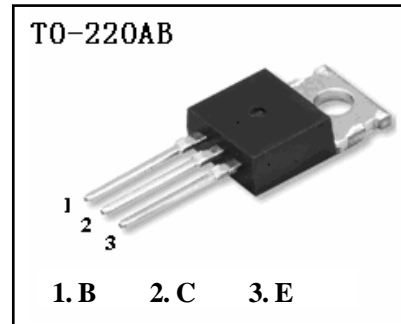


MJE Power Transistor

Silicon NPN Power Transistor Product specification MJE13005 series

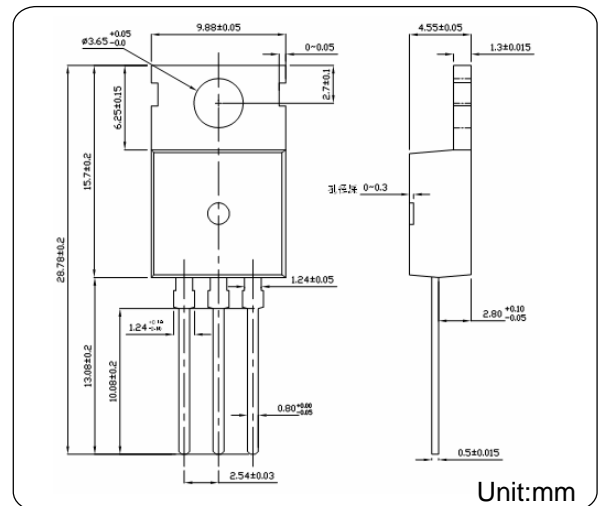
DESCRIPTION

Silicon NPN, high power transistors in a plastic envelope, primarily for use in high-speed power switching circuits.



Absolute Maximum Ratings (Ta = 25°C)

| Parameter | I | Value | Unit |
|-------------------------------------|-----------|---------|------|
| Collector-Base Voltage | V_{CBO} | 700 | V |
| Collector-Emitter Voltage | V_{CEO} | 400 | V |
| Emitter-Base Voltage | V_{EBO} | 9 | V |
| Collector Current | I_C | 5.0 | A |
| Base Current | I_B | 2.0 | A |
| Total Dissipation at | P_{tot} | 75 | W |
| Max. Operating Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55~150 | °C |



Electrical Characteristics (Ta = 25°C)

| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|------------------------|------|------|------|------|
| Collector Cut-off Current | I_{CBO} | $V_{CE}=700V, I_E=0$ | — | — | 10 | uA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=6.0V, I_C=0$ | — | — | 10 | uA |
| Collector-Emitter Sustaining Voltage | V_{CEO} | $I_C=10mA, I_B=0$ | 400 | — | — | V |
| DC Current Gain | h_{FE} | $V_{CE}=5V, I_C=1.0A$ | 15 | — | 30 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=4.0A, I_B=1.0A$ | — | — | 1.0 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=2.0A, I_B=0.5A$ | — | — | 1.5 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE}=10V, I_C=0.5A$ | 4 | — | — | MHz |
| Turn Off Time | t_S | $I_{B1}=-I_{B2}=0.5A,$ | 2.0 | 3.0 | 4.0 | us |