



MJE13005

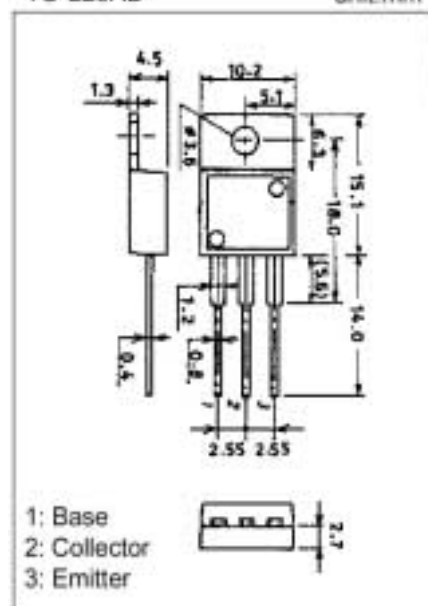
NPN SILICON TRANSISTOR

**ELECTRONIC TRANSFORMERS ,
POWER SWICHING CIRCUIT**

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|------------------|----------|------|
| Collector-Base Voltage | V _{CB0} | 700 | V |
| Collector-Emitter Voltage | V _{CEO} | 400 | V |
| Emitter-Base Voltage | V _{EB0} | 9 | V |
| Collector Current | I _c | 4 | A |
| Collector Power Dissipation (T _c =25°C) | P _c | 75 | W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -55~+150 | °C |

TO-220AB unit:mm



ELECTRICAL CHARACTERISTICS (T_A=25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | MAX. | UNIT |
|--------------------------------------|-----------------------|--|------|------|------|
| Collector-Emitter Sustaining Voltage | V _{CEO(sus)} | I _c =10mA, I _B =0 | 400 | - | V |
| Collector-Base Breakdown Voltage | V(BR)CBO | I _E =0, I _c =1mA | 700 | - | V |
| Emitter-Base Breakdown Voltage | V(BR) EBO | I _E =1mA, I _C =0 | 9 | - | V |
| Collector Cut off current | I _{CBO} | V _{CB} =700V I _E =0 | - | 100 | μ A |
| Collector-Emitter Cut off Current | I _{CEO} | V _{CE} =400V I _B =0 | - | 50 | μ A |
| Emitter-Base Cut off Voltage | I _{EBO} | V _{EB} =7V I _c =0 | - | 10 | μ A |
| DC Current Gain | hFE1 | V _{CE} =10V, I _c =0.5A, | 8 | 40 | - |
| | hFE2 | V _{CE} =5V, I _c =2A, | 6 | 30 | - |
| Collector-Emitter Saturation Voltage | V _{CE(sat1)} | I _c =1A, I _B =0.2A | - | 0.5 | V |
| | V _{CE(sat2)} | I _c =4A, I _B =1A | - | 1.2 | V |
| Base-Emitter Saturation Voltage | V _{BE(sat)} | I _c =2A, I _B =0.5A | - | 1.6 | |
| Fall Time | t _f | I _c =2A | - | 0.9 | μ S |
| Storage Time | t _s | I _{B1} =-1 I _{B2} =0.4A | - | 4 | μ S |
| Frequency Characteristics | f _T | V _{CE} =10V, I _c =0.5A, f=1MHz | 5 | - | MHz |