

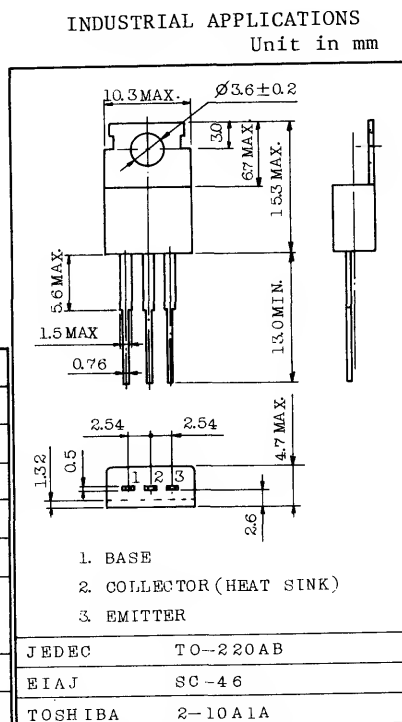
SWITCHING REGULATOR AND HIGH VOLTAGE  
SWITCHING APPLICATIONS.  
HIGH SPEED DC-DC CONVERTER APPLICATION.

## FEATURES:

- Excellent Switching Times  
:  $t_r=1.0\mu s$ (Max.),  $t_f=1.0\mu s$ (Max.) at  $I_C=4A$   
• High Collector Breakdown Voltage :  $V_{CEO}=400V$

MAXIMUM RATINGS (Ta=25°C)

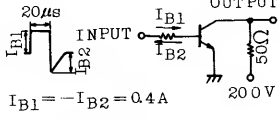
| CHARACTERISTIC              |         | SYMBOL    | RATING    | UNIT |
|-----------------------------|---------|-----------|-----------|------|
| Collector-Base Voltage      |         | $V_{CBO}$ | 500       | V    |
| Collector-Emitter Voltage   |         | $V_{CEO}$ | 400       | V    |
| Emitter-Base Voltage        |         | $V_{EBO}$ | 7         | V    |
| Collector Current           |         | $I_C$     | 5         | A    |
| Base Current                |         | $I_B$     | 1         | A    |
| Collector Power Dissipation | Ta=25°C | $P_C$     | 1.5       | W    |
|                             | Tc=25°C |           | 40        |      |
| Junction Temperature        |         | $T_j$     | 150       | °C   |
| Storage Temperature Range   |         | $T_{stg}$ | -55 ~ 150 | °C   |



Mounting kit No. AC75

Weight : 1.9g

ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ )

| ELECTRICAL CHARACTERISTICS (Ia=25 °C) |              |          | Weight 1.5g                                                                                                                         |      |      |      |      |
|---------------------------------------|--------------|----------|-------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|
| CHARACTERISTIC                        |              | SYMBOL   | TEST CONDITION                                                                                                                      | MIN. | TYP. | MAX. | UNIT |
| Collector Cut-off Current             |              | ICBO     | VCB=400V, IE=0                                                                                                                      | -    | -    | 100  | A    |
| Emitter Cut-off Current               |              | IEBO     | VEB=7V, IC=0                                                                                                                        | -    | -    | 1    | mA   |
| Collector-Base Breakdown Voltage      |              | V(BR)CBO | IC=1mA, IE=0                                                                                                                        | 500  | -    | -    | V    |
| Collector-Emitter Breakdown Voltage   |              | V(BR)CEO | IC=10mA, IB=0                                                                                                                       | 400  | -    | -    | V    |
| DC Current Gain                       |              | hFE      | VCe=5V, IC=3A                                                                                                                       | 12   | -    | -    |      |
|                                       |              |          | VCe=5V, IC=5A                                                                                                                       | 8    | -    | -    |      |
| Collector-Emitter Saturation Voltage  |              | VCE(sat) | IC=5A, IB=1A                                                                                                                        | -    | -    | 1.0  | V    |
| Base-Emitter Saturation Voltage       |              | VBE(sat) | IC=5A, IB=1A                                                                                                                        | -    | -    | 1.5  | V    |
| Switching Time                        | Rise Time    | tr       |  <p>IB1 = -IB2 = 0.4A<br/>DUTY CYCLE &lt; 1%</p> | -    | -    | 1.0  | µs   |
|                                       | Storage Time | tstg     |                                                                                                                                     | -    | -    | 2.5  |      |
|                                       | Fall Time    | tf       |                                                                                                                                     | -    | -    | 1.0  |      |

## STATIC CHARACTERISTICS

