

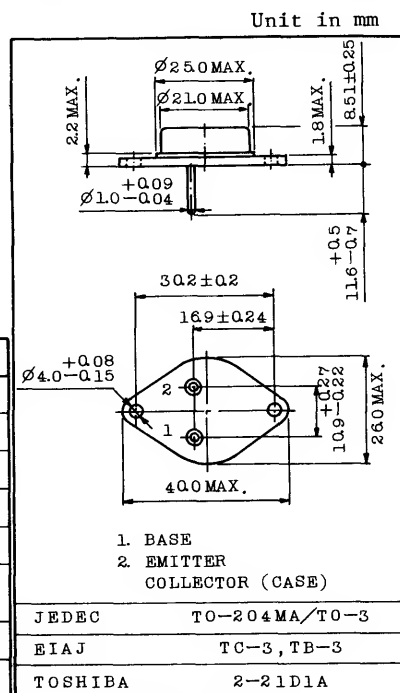
GENERAL PURPOSE POWER TRANSISTOR.  
POWER REGULATOR, SWITCHING AND SOLENOID DRIVES  
APPLICATIONS.

## FEATURES:

- High Gain at High Current
- Low Saturation Voltage :  $V_{CE(sat)}=1.0V$  (Max.)  
@  $I_C=5A$ ,  $I_B=0.5A$
- Excellent Area of Safe Operatings

MAXIMUM RATINGS ( $T_a=25^\circ C$ )

| CHARACTERISTIC                                        | SYMBOL        | RATING    | UNIT         |
|-------------------------------------------------------|---------------|-----------|--------------|
| * Collector-Base Voltage                              | $V_{CBO}$     | 80        | V            |
| * Collector-Emitter Voltage                           | $V_{CEO}$     | 60        | V            |
| * Emitter-Base Voltage                                | $V_{EBO}$     | 7         | V            |
| * Collector Current                                   | $I_C$         | 10        | A            |
| * Base Current                                        | $I_B$         | 4         | A            |
| * Collector Power Dissipation<br>( $T_c=25^\circ C$ ) | $P_C$         | 150       | W            |
| * Thermal Resistance                                  | $\theta_{jc}$ | 1.17      | $^\circ C/W$ |
| * Junction Temperature                                | $T_j$         | 200       | $^\circ C$   |
| * Storage Temperature Range                           | $T_{stg}$     | -65 ~ 200 | $^\circ C$   |



Weight : 12.6g

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

| CHARACTERISTIC                              | SYMBOL               | TEST CONDITION                                     | MIN. | TYP. | MAX. | UNIT |
|---------------------------------------------|----------------------|----------------------------------------------------|------|------|------|------|
| * Collector Cut-off Current                 | $I_{CEX}$            | $V_{CE}=80V$ , $V_{BE}=-1.5V$                      | -    | -    | 1    | mA   |
| * Collector Cut-off Current                 | $I_{CEX}$            | $V_{CE}=60V$ , $V_{BE}=-1.5V$<br>$T_c=150^\circ C$ | -    | -    | 10   | mA   |
| * Emitter Cut-off Current                   | $I_{EBO}$            | $V_{EB}=7V$ , $I_C=0$                              | -    | -    | 5    | mA   |
| * Collector-Emitter Sustaining Voltage      | $V_{CEO}^{**}$ (SUS) | $I_C=200mA$ , $I_B=0$                              | 60   | -    | -    | V    |
| * DC Current Gain                           | $h_{FE}$             | $V_{CE}=2V$ , $I_C=1A$                             | 25   | -    | 90   |      |
|                                             |                      | $V_{CE}=2V$ , $I_C=3A$                             | 15   | -    | -    |      |
| * Base-Emitter Voltage                      | $V_{BE}$             | $V_{CE}=2V$ , $I_C=3A$                             | -    | -    | 1.5  | V    |
| * Saturation Voltage                        | Collector-Emitter    | $V_{CE(sat)}$ $I_C=5A$ , $I_B=0.5A$                | -    | -    | 1.0  | V    |
|                                             | Base-Emitter         | $V_{BE(sat)}$ $I_C=5A$ , $I_B=0.5A$                | -    | -    | 2.0  | V    |
| Small Signal Forward Current Transfer Ratio | $ h_{fe} $           | $V_{CE}=10V$ , $I_C=0.5A$<br>$f=1MHz$              | 4    | -    | -    |      |

\* In accordance with JEDEC registration data.

\*\* The sustaining voltage  $V_{CEO}(SUS)$  MUST NOT be measured on a curve tracer.

