

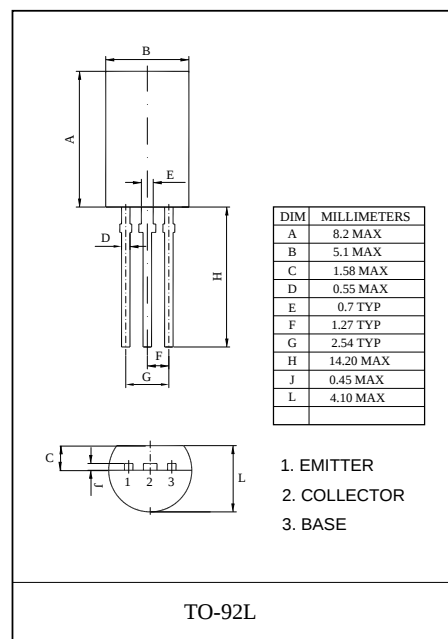
VOLTAGE REGULATORS, RELAY DRIVERS  
LAMP DRIVERS, ELECTRICAL EQUIPMENT

## FEATURES

- Adoption of MBIT processes.
- Low collector- to- emitter saturation voltage.
- Fast switching speed.
- Large current capacity and wide ASO.
- Complementary to FTB985.

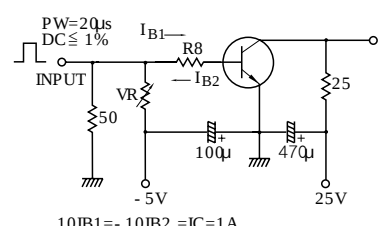
## MAXIMUM RATING (Ta=25 °C)

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT |
|-----------------------------|-----------|-----------|------|
| Collector- Base Voltage     | $V_{CBO}$ | 60        | V    |
| Collector- Emitter Voltage  | $V_{CEO}$ | 50        | V    |
| Emitter- Base Voltage       | $V_{EBO}$ | 6         | V    |
| Collector Current           | $I_C$     | 3         | A    |
| Collector Current (Pulse)   | $I_{CP}$  | 6         | A    |
| Collector Power Dissipation | $P_C$     | 1         | W    |
| Junction Temperature        | $T_j$     | 150       | °C   |
| Storage Temperature Range   | $T_{stg}$ | - 55~ 150 | °C   |



## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| CHARACTERISTIC                        | SYMBOL             | TEST CONDITION              | MIN. | TYP. | MAX. | UNIT.   |
|---------------------------------------|--------------------|-----------------------------|------|------|------|---------|
| Collector Cut- off Current            | $I_{CBO}$          | $V_{CB}=40V, I_E=0$         | -    | -    | 1    | $\mu A$ |
| Emitter Cut- off Current              | $I_{EBO}$          | $V_{EB}=4V, I_C=0$          | -    | -    | 1    | $\mu A$ |
| DC Current Gain                       | $h_{FE}(1)$ (Note) | $V_{CE}=2V, I_C=100mA$      | 100  | -    | 400  |         |
|                                       | $h_{FE}(2)$        | $V_{CE}=2V, I_C=3A$         | 35   | -    | -    |         |
| Collector- Emitter Saturation Voltage | $V_{CE(sat)}$      | $I_C=2A, I_B=100mA$         | -    | 0.19 | 0.5  | V       |
| Base- Emitter Saturation Voltage      | $V_{BE(sat)}$      | $I_C=2A, I_B=100mA$         | -    | 0.94 | 1.2  | V       |
| Transition Frequency                  | $f_T$              | $V_{CE}=10V, I_C=50mA$      | -    | 150  | -    | MHz     |
| Collector Output Capacitance          | $C_{ob}$           | $V_{CB}=10V, I_E=0, f=1MHz$ | -    | 25   | -    | pF      |
| Switching Time                        | Turn- on Time      | $t_{on}$                    | -    | 70   | -    | nS      |
|                                       | Storage Time       | $t_{stg}$                   | -    | 650  | -    |         |
|                                       | Fall Time          | $t_f$                       | -    | 35   | -    |         |


  
 PW=20 $\mu$ s, DC  $\leq$  1%, 10IB1= - 10IB2 =IC=1A

Note :  $h_{FE}$  (1) Classification A:100~200, B:140~280, C:200~400

