



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 FTB1124.

**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 | $P_C$     | 500       | mW   |
|                             | $P_C^*$   | 1         | W    |
| Junction Temperature        | $T_j$     | 150       | °C   |
| Storage Temperature Range   | $T_{stg}$ | - 55~ 150 | °C   |

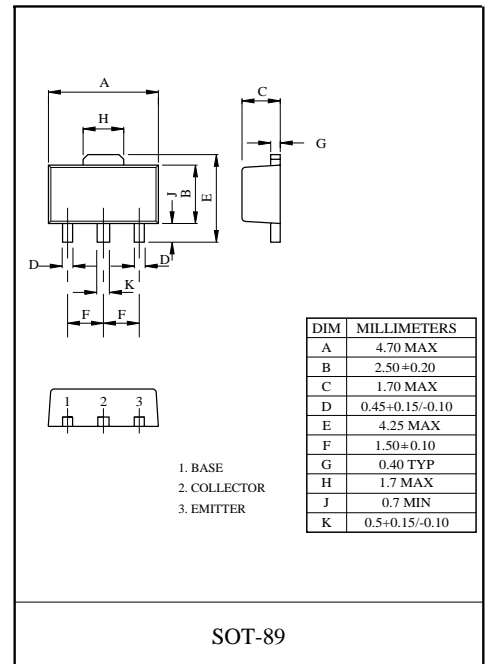
\* : Package mounted on ceramic substrate(250mm<sup>2</sup>×0.8t)

**Electrical characteristics(Ta=25°C)**

| Symbol        | Test condition                | Rating |      |     | Unit    |
|---------------|-------------------------------|--------|------|-----|---------|
|               |                               | Min    | Typ  | Max |         |
| $V_{CBO}$     | $I_C=10 \mu A$ $I_E=0$        | 60     |      |     | V       |
| $V_{CEO}$     | $I_C=1.0mA$ $I_B=0$           | 50     |      |     | V       |
| $V_{EBO}$     | $I_E=10 \mu A$ $I_C=0$        | 6.0    |      |     | V       |
| $I_{CBO}$     | $V_{CB}=40V$ $I_E=0$          |        |      | 1.0 | $\mu A$ |
| $I_{EBO}$     | $V_{EB}=4.0V$ $I_C=0$         |        |      | 1.0 | $\mu A$ |
| $h_{FE(1)}$   | $V_{CE}=2.0V$ $I_C=100mA$     | 100    |      | 400 |         |
| $h_{FE(2)}$   | $V_{CE}=2.0V$ $I_C=3.0A$      | 35     |      |     |         |
| $V_{CE(sat)}$ | $I_C=2.0A$ $I_B=100mA$        |        | 0.19 | 0.5 | V       |
| $V_{BE(sat)}$ | $I_C=2.0A$ $I_B=100mA$        |        | 0.94 | 1.2 | V       |
| $f_T$         | $V_{CE}=10V$ $I_C=50mA$       |        | 150  |     | MHz     |
| $C_{ob}$      | $V_{CB}=10V$ $I_E=0$ $f=1MHz$ |        | 25   |     | pF      |
| $t_{on}$      | $10I_{B1}=-10I_{B2}=I_C=1.0A$ |        | 70   |     | nS      |
| $t_{stg}$     |                               |        | 650  |     | nS      |
| $t_f$         |                               |        | 35   |     | nS      |

**$h_{FE(1)}$  Classifications、Marking:**

| $h_{FE(1)}$ Classifications | A           | B           | C           |
|-----------------------------|-------------|-------------|-------------|
| $h_{FE(1)}$ Range           | 100~200     | 140~280     | 200~400     |
| Marking                     | YHA *<br>** | YHB *<br>** | YHC *<br>** |



## ●Electrical characteristic curves

