

2SD1439

Silicon NPN Triple-Diffused Junction Mesa Type

Horizontal Deflection Output

■ Features

- Damper diode built-in
- High breakdown voltage and high reliability by glass passivation
- High speed switching
- Wide area of safety operation (ASO)

■ Absolute Maximum Ratings (Tc=25°C)

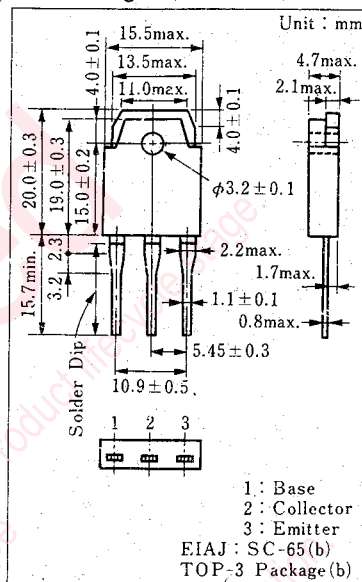
| Item | Symbol | Value | Unit |
|-----------------------------|------------|------------|------|
| Collector-base voltage | V_{CB0} | 1500 | V |
| Collector-emitter voltage | V_{CES} | 1500 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 3 | A |
| Peak collector current | I_{CP}^* | 10 | A |
| Peak base current | I_{BP} | 3.5 | A |
| Reverse peak base current | I_{BP} | -2.5 | A |
| Collector power dissipation | Tc=25°C | 50 | W |
| | Ta=25°C | 2.5 | |
| Junction temperature | T_j | 130 | °C |
| Storage temperature | T_{stg} | -55 ~ +130 | °C |

* Non repetitive peak value

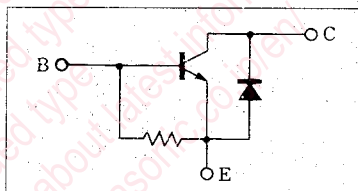
■ Electrical Characteristics (Tc=25°C)

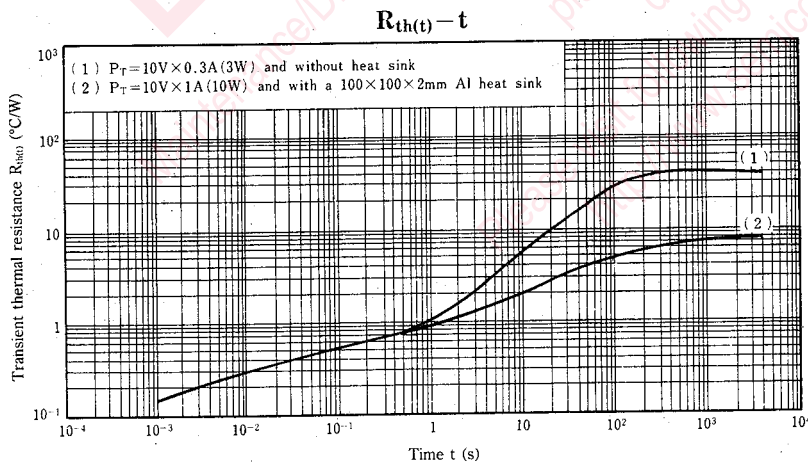
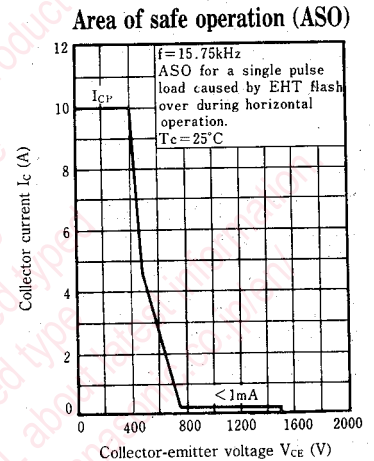
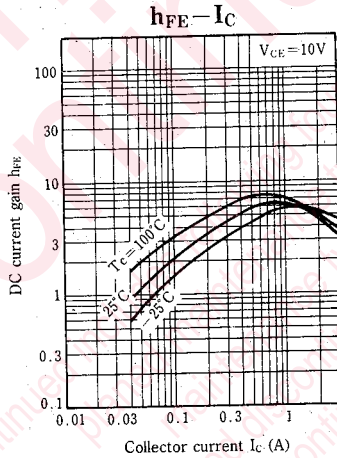
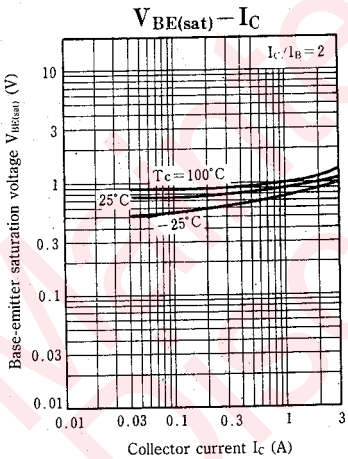
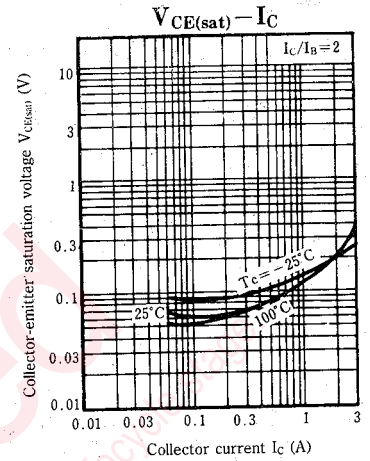
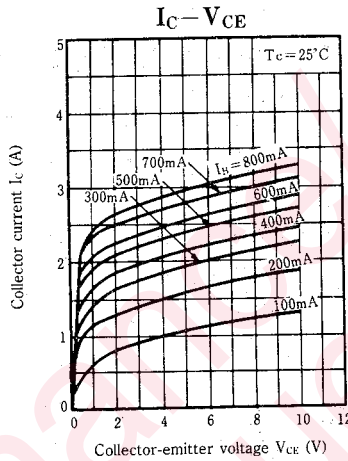
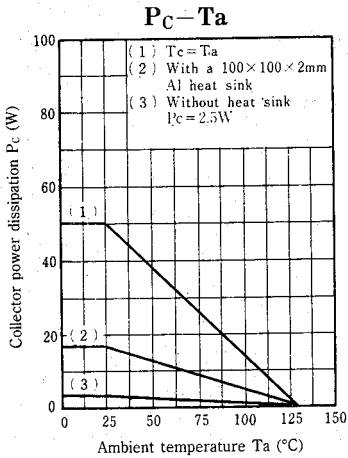
| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------------------|---------------|---|------|------|------|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 750 \text{ V}, I_E = 0$ | | | 50 | μA |
| | | $V_{CB} = 1500 \text{ V}, I_E = 0$ | | | 1 | mA |
| Emitter-base voltage | V_{EBO} | $I_E = 500 \text{ mA}, I_C = 0$ | 5 | | | V |
| DC current gain | h_{FE} | $V_{CE} = 10 \text{ V}, I_C = 2 \text{ A}$ | 4 | | 12 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 2 \text{ A}, I_B = 0.75 \text{ A}$ | | | 5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 2 \text{ A}, I_B = 0.75 \text{ A}$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ A}, f = 0.5 \text{ MHz}$ | | 2 | | MHz |
| Fall time | t_f | $I_C = 2 \text{ A}, I_{Bend} = 0.75 \text{ A}$ | | | 0.75 | μs |
| Storage time | t_{stg} | $L_{leak} = 5 \mu\text{H}$ | 3 | | 7 | μs |
| Diode forward voltage | V_F | $V_{CE} = 10 \text{ V}, I_C = 0.5 \text{ A}, f = 0.5 \text{ MHz}$ | | | -2.2 | V |

■ Package Dimensions



■ Inner Circuit





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