Silicon NPN Triple Diffused Character Display Horizntal Deflection Output

HITACHI

ADE-208-576 B (Z) 3rd. Edition September 1997

Features

• High breakdown voltage

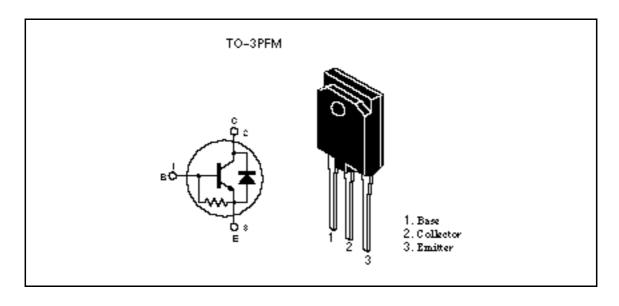
 $V_{\text{CES}} = 1500 \ V$

High speed switching

 $t_f = 0.15 \ \mu sec$ (typ.) at $f_H = 64 \ kHz$

 Isolated package TO–3PFM

Outline





Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

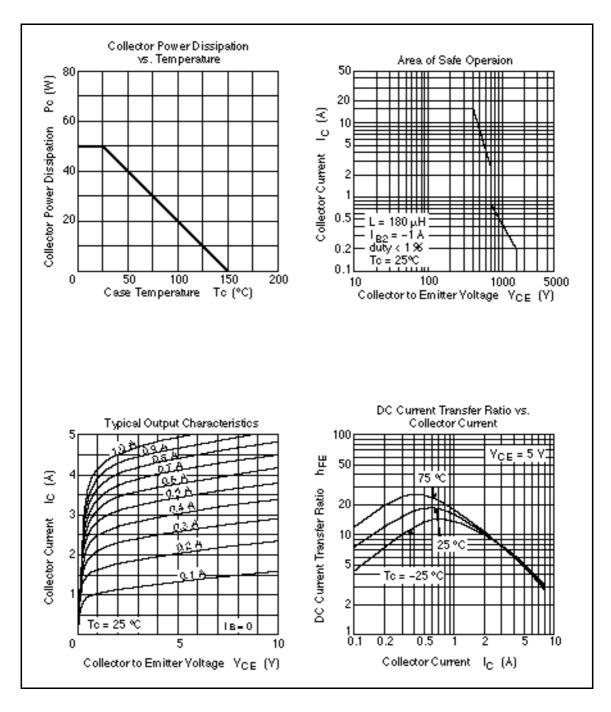
| Item | Symbol | Ratings | Unit |
|--------------------------------------------|---------------------------------|-------------|------|
| Collector to emitter voltage | V _{CES} | 1500 | V |
| Emitter to base voltage | V_{EBO} | 6 | V |
| Collector current | I _c | 8 | A |
| Collector peak current | i _{c(peak)} | 16 | A |
| Collector power dissipation | P _C ^{Note1} | 50 | W |
| Junction temperature | Tj | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |
| Collector to emitter diode forward current | I _D | 8 | A |

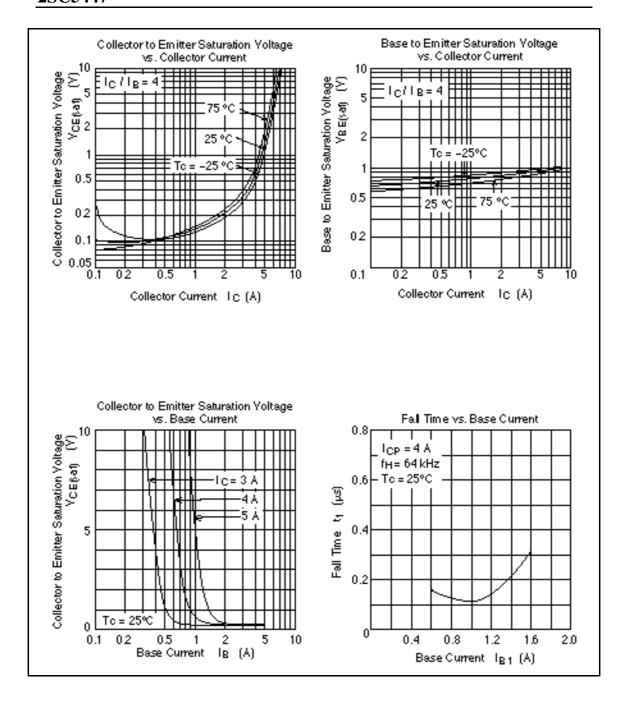
Note: 1. Value at Tc = 25°C

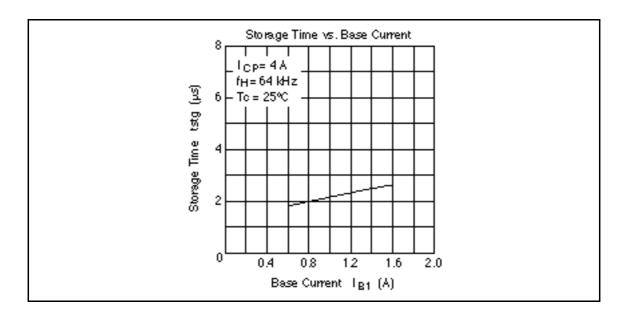
Electrical Characteristics ($Ta = 25^{\circ}C$)

| Item | Symbol | Min | Тур | Max | Unit | Test Conditions |
|--------------------------------------------|----------------------|-----|------|-----|------|---------------------------------------------------|
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 6 | _ | _ | V | $I_{\rm E} = 400 {\rm mA}, \ I_{\rm C} = 0$ |
| Collector cutoff current | I _{CES} | _ | _ | 500 | μΑ | $V_{CE} = 1500V, R_{BE} = 0$ |
| DC current transfer ratio | h _{FE1} | 5 | _ | 25 | | $V_{CE} = 5 \text{ V}, I_{C} = 1 \text{A}$ |
| DC current transfer ratio | h _{FE2} | 4 | _ | 6 | | $V_{CE} = 5 \text{ V}, I_{C} = 5 \text{A}$ |
| Collector to emitter saturation voltage | $V_{\text{CE(sat)}}$ | _ | _ | 5 | V | $I_{\rm C} = 5A, I_{\rm B} = 1.25A$ |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | _ | _ | 1.5 | V | $I_{\rm C} = 5A, I_{\rm B} = 1.25A$ |
| Collector to emitter diode forward voltage | V_{ECF} | _ | _ | 2 | V | I _F = 8A |
| Fall time | t _f | | 0.2 | 0.4 | μs | $I_{CP} = 4A, I_{B1} = 1.2A$ $f_{H} = 31.5kHz$ |
| Fall time | t _f | _ | 0.15 | _ | μs | $I_{CP} = 4A, I_{B1} = 1A$ $f_{H} = 64kHz$ |

Main Characteristics

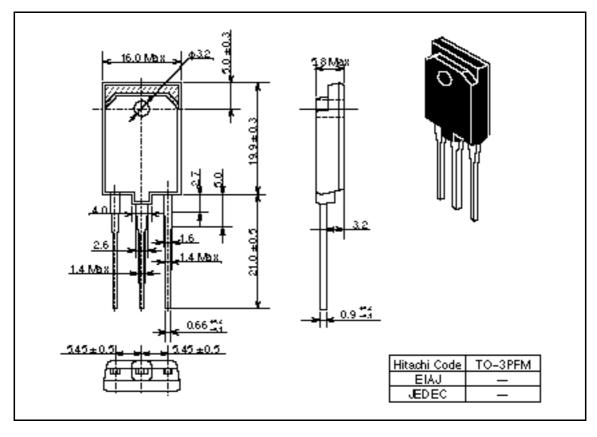






Package Dimensions

Unit: mm



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