# 2SC5480

Silicon NPN Triple Diffused
Horizntal Deflection Output

HITACHI

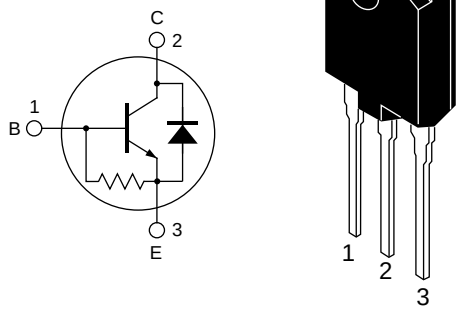
ADE-208-632 (Z)
1st. Edition
Oct. 1, 1998

## Features

- High breakdown voltage
  $V_{CES}$ = 1500 V
- Isolated package
  TO–3PFM
- Built-in damper diode

## Outline

TO–3PFM




1. Base
2. Collecto
3. Emitter

## Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|---|---|---|---|
| Collector to emitter voltage | $V_{CES}$ | 1500 | V |
| Emitter to base voltage | $V_{EBO}$ | 5 | V |
| Collector current | $I_C$ | 14 | A |
| Collector peak current | $i_{c(peak)}$ | 28 | 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 | $I_D$ | 14 | A |

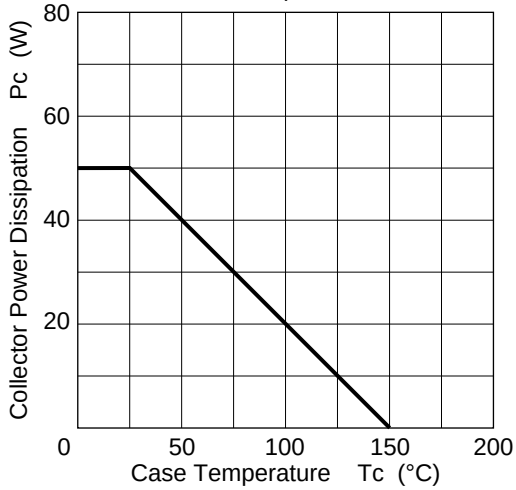
Note: 1. Value at Tc = 25°C

## Electrical Characteristics (Ta = 25°C)

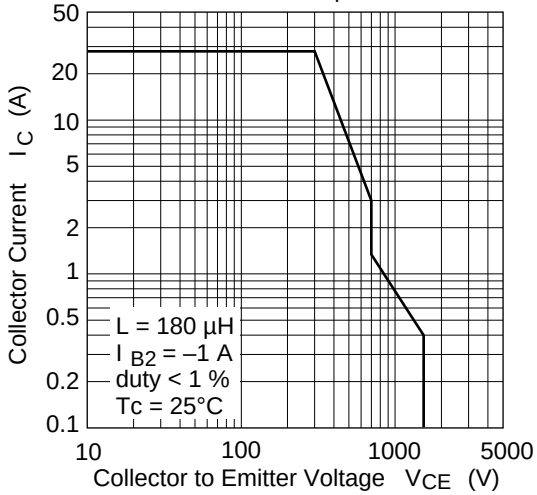
| Item | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 5 | — | — | V | $I_E$ = 500mA, $I_C$ = 0 |
| Collector cutoff current | $I_{CES}$ | — | — | 500 | µA | $V_{CE}$ = 1500V, $R_{BE}$ = 0 |
| DC current transfer ratio | $h_{FE1}$ | 5 | — | 25 | | $V_{CE}$ = 5 V, $I_C$ = 1A |
| DC current transfer ratio | $h_{FE2}$ | 4 | — | 7 | | $V_{CE}$ = 5 V, $I_C$ = 10A |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 5 | V | $I_C$ = 10A, $I_B$ = 2.5A |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | — | — | 1.5 | V | $I_C$ = 10A, $I_B$ = 2.5A |
| Collector to emitter diode forward voltage | $V_{ECF}$ | — | — | 2 | V | $I_F$ = 14A |
| Fall time | $t_f$ | — | 0.2 | 0.4 | µs | $I_{CP}$ = 7A, $I_{B1}$= 2.4A<br>$f_H$ = 31.5kHz |

## Main Characteristics

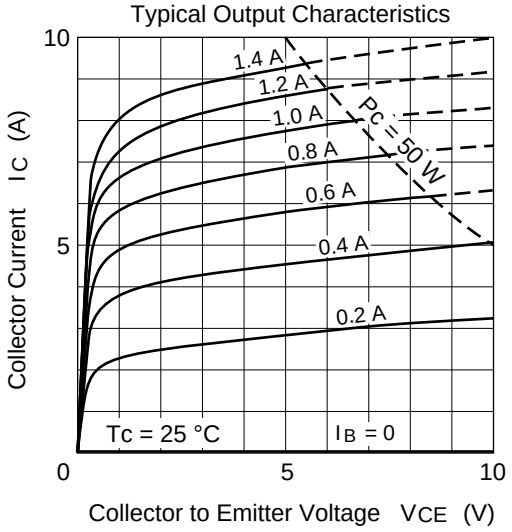
Collector Power Dissipation vs. Temperature



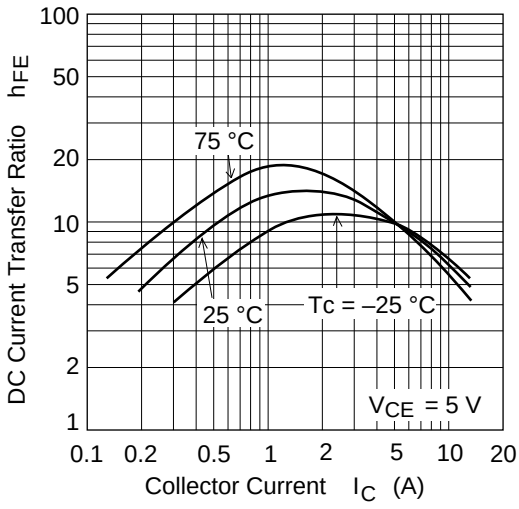

Area of Safe Operaion



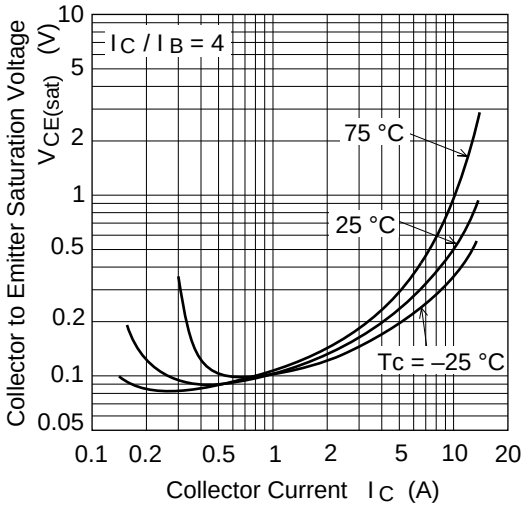

Typical Output Characteristics



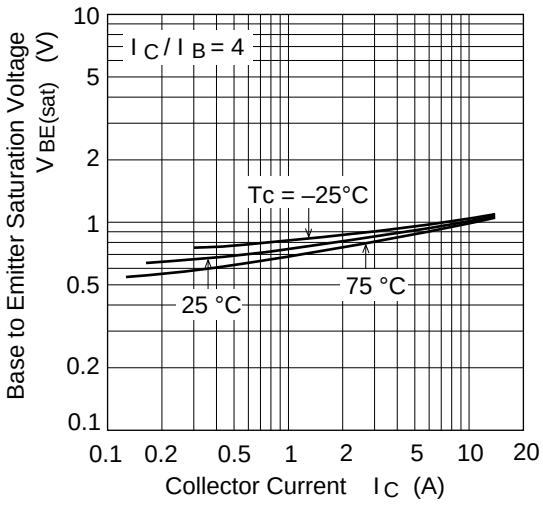

DC Current Transfer Ratio vs. Collector Current



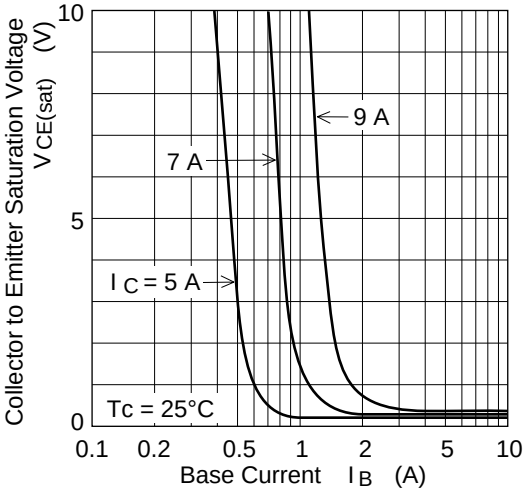
Collector to Emitter Saturation Voltage vs. Collector Current



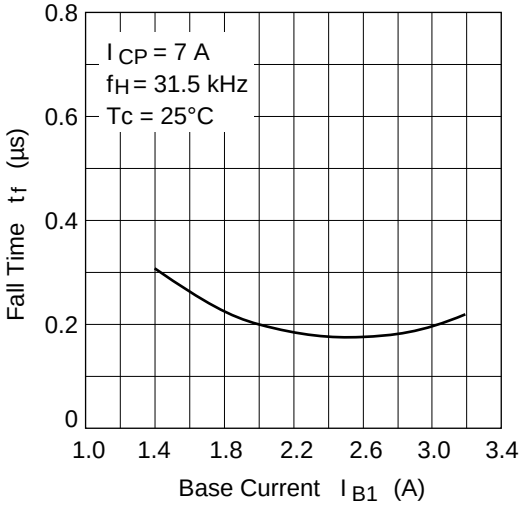

Base to Emitter Saturation Voltage vs. Collector Current



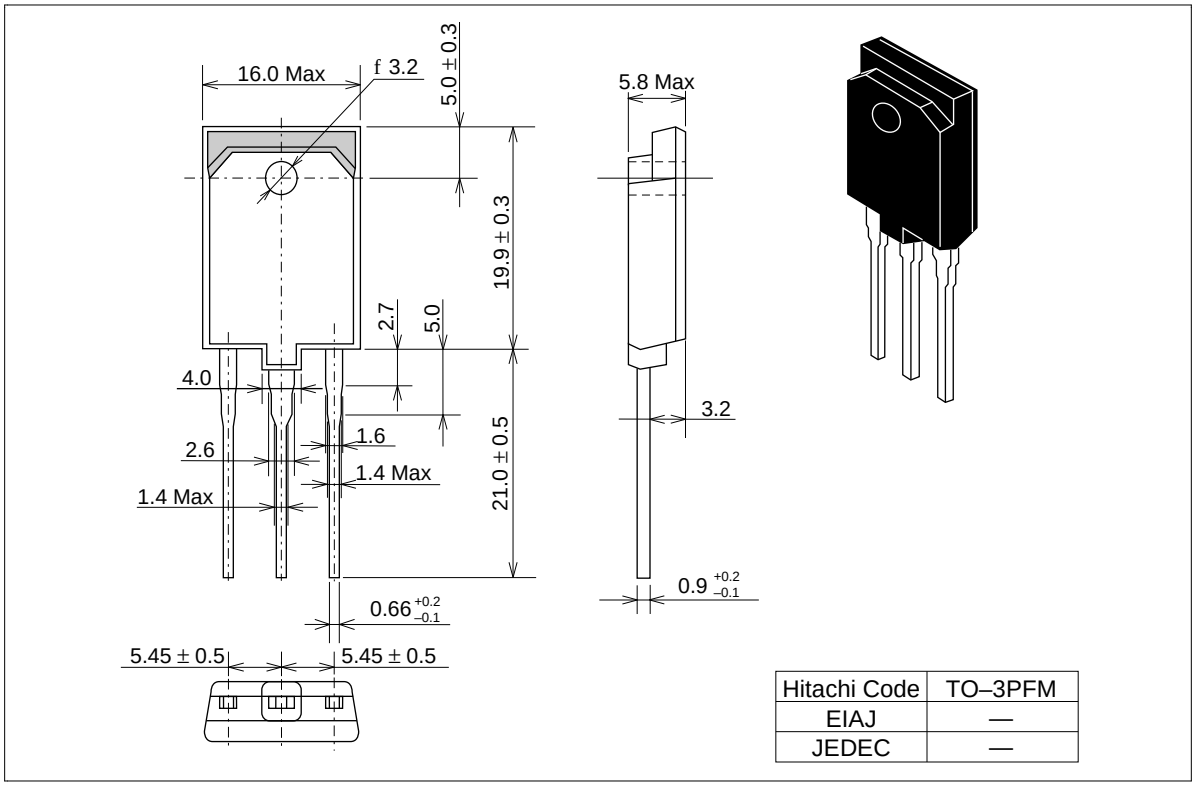

Collector to Emitter Saturation Voltage vs. Base Current




Fall Time vs. Base Current



## Package Dimensions (Unit: mm)




| | |
|---|---|
| Hitachi Code | TO–3PFM |
| EIAJ | — |
| JEDEC | — |

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