

2SC4927

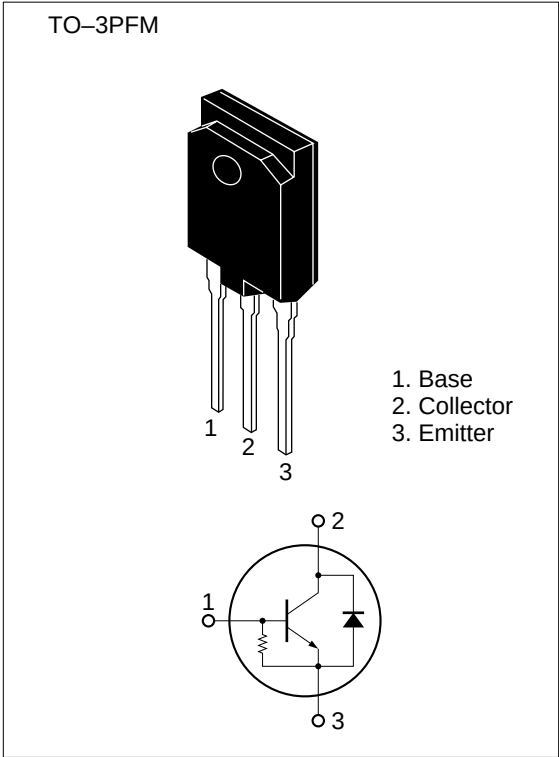
Silicon NPN Triple Diffused

Application

TV/Character display horizontal deflection output

Features

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



Absolute Maximum Ratings (Ta = 25°C)

| Item                         | Symbol         | Rating      | 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       | $i_{c(peak)}$  | 9           | A    |
| Collector surge current      | $i_{c(surge)}$ | 18          | A    |
| Collector power dissipation  | $P_C^{*1}$     | 50          | W    |
| Junction temperature         | $T_j$          | 150         | °C   |
| Storage temperature          | $T_{stg}$      | -55 to +150 | °C   |
| C to E diode forward current | $I_D$          | 8           | A    |

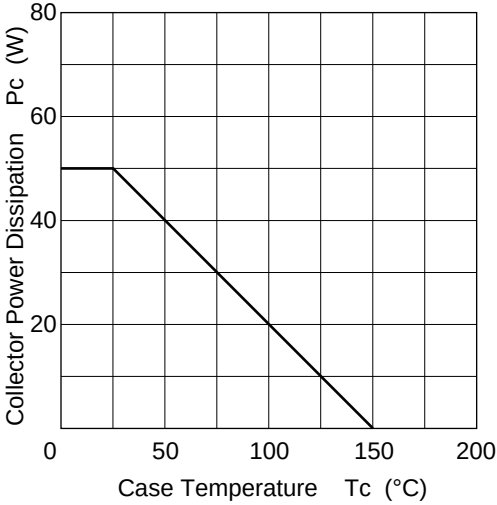
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

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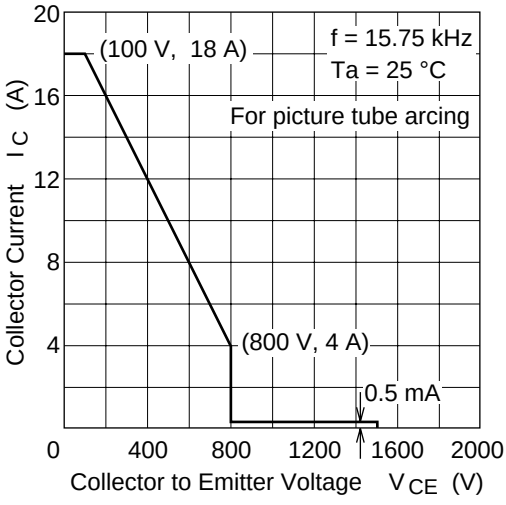
Electrical Characteristics (Ta = 25°C)

| Item                                    | Symbol        | Min | Typ | Max | Unit          | Test Conditions                                                                                                |
|-----------------------------------------|---------------|-----|-----|-----|---------------|----------------------------------------------------------------------------------------------------------------|
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$ | 6   | —   | —   | V             | $I_E = 500\text{ mA}$ , $I_C = 0$                                                                              |
| Collector cutoff current                | $I_{CES}$     | —   | —   | 500 | $\mu\text{A}$ | $V_{CE} = 1500\text{ V}$ , $R_{BE} = 0$                                                                        |
| DC current transfer ratio               | $h_{FE}$      | —   | —   | 25  | —             | $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ A}$                                                                     |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | —   | 5   | V             | $I_C = 6\text{ A}$ , $I_B = 1.2\text{ A}$                                                                      |
| Base to emitter saturation voltage      | $V_{BE(sat)}$ | —   | —   | 1.5 | V             | $I_C = 6\text{ A}$ , $I_B = 1.2\text{ A}$                                                                      |
| C to E diode forward voltage            | $V_{ECF}$     | —   | —   | 2.0 | V             | $I_F = 8\text{ A}$                                                                                             |
| Fall time                               | $t_f$         | —   | —   | 0.5 | $\mu\text{s}$ | $I_{CP} = 6\text{ A}$ , $I_{B1} = 1.2\text{ A}$ ,<br>$I_{B2} \approx -2.4\text{ A}$<br>$f_H = 31.5\text{ kHz}$ |

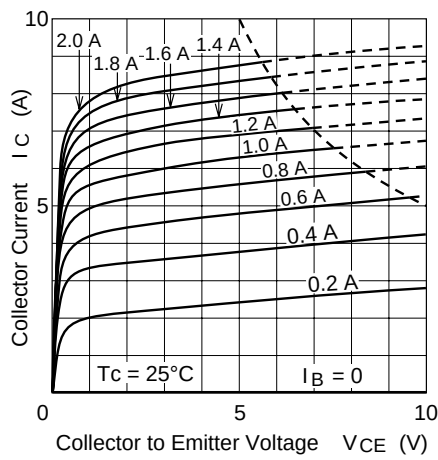
Maximum Collector Power Dissipation Curve



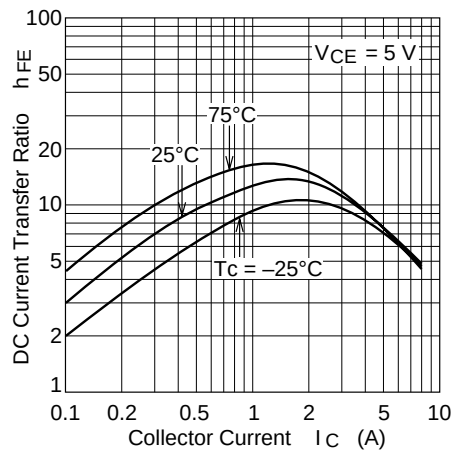
Area of Safe Operation



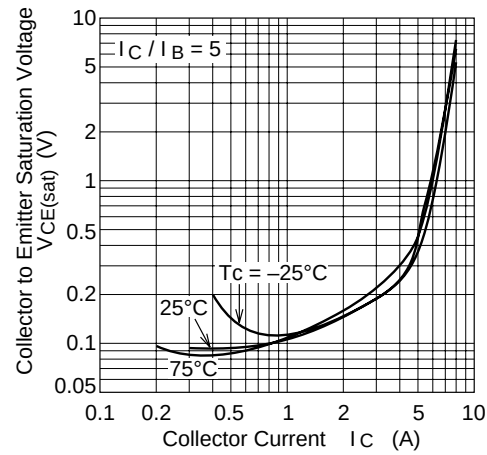
Typical Output Characteristics



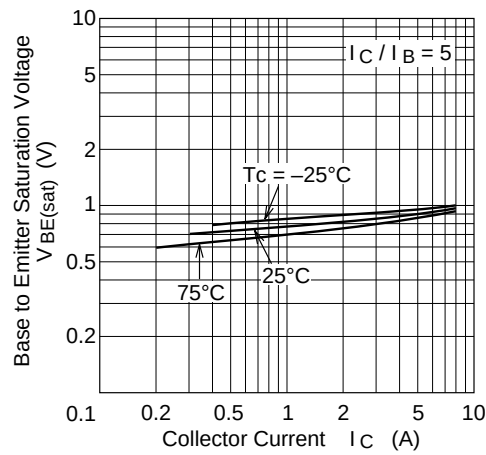
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



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Collector to Emitter Saturation Voltage  
vs. Base Current

