

# Surface-mount Power Transistor Array SPF0001

## Absolute Maximum Ratings (Ta=25°C)

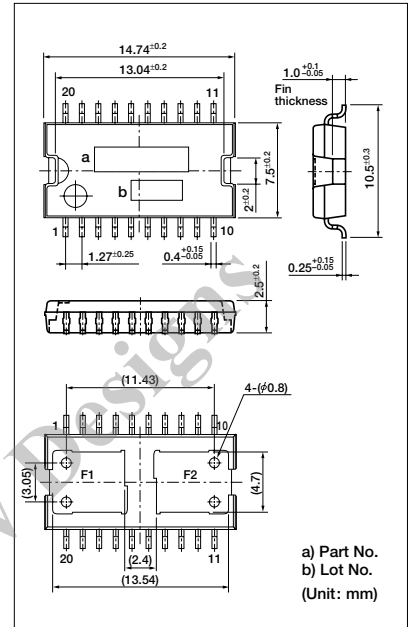
| Symbol           | Ratings        | Unit |
|------------------|----------------|------|
| V <sub>CB0</sub> | 115±10         | V    |
| V <sub>CE0</sub> | 115±10         | V    |
| V <sub>EB0</sub> | 6              | V    |
| I <sub>c</sub>   | ±6 (pulse ±10) | A    |
| I <sub>b</sub>   | 1              | A    |
| P <sub>T</sub> * | 2.5 (Ta=25°C)  | W    |
| T <sub>j</sub>   | 150            | °C   |
| T <sub>stg</sub> | -55 to +150    | °C   |

\* Use glass epoxy substrate (FR4) 70mm×100mm×1.6mm

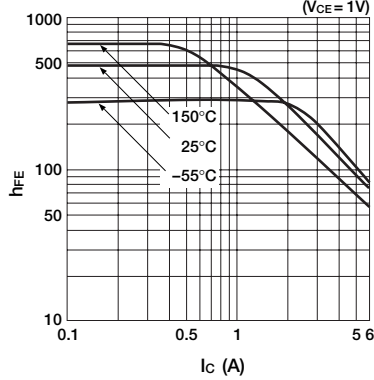
## Electrical Characteristics (Ta=25°C)

| Symbol               | Test Conditions                            | Ratings |      |      | Unit |
|----------------------|--|---------|------|------|------|
|                      |  | min     | typ  | max  |      |
| I <sub>CB0</sub>     | V <sub>CB</sub> =105V                      |         |      | 10   | μA   |
| I <sub>EB0</sub>     | V <sub>EB</sub> =6V                        |         |      | 10   | μA   |
| V <sub>CE0</sub>     | I <sub>c</sub> =50mA                       | 105     | 115  | 125  | V    |
| h <sub>FE</sub>      | V <sub>CE</sub> =1V, I <sub>c</sub> =1A    | 400     | 800  | 1500 |      |
| V <sub>CE(sat)</sub> | I <sub>c</sub> =1.2A, I <sub>b</sub> =12mA |         | 0.08 | 0.12 | V    |
| V <sub>FEC</sub>     | I <sub>FEC</sub> =6A                       |         | 1.25 | 1.5  | V    |
| Es/b                 | L=10mH                                     | 45      |      |      | mJ   |

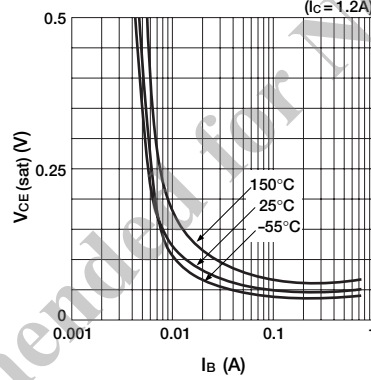
## External Dimensions SPF 20pin



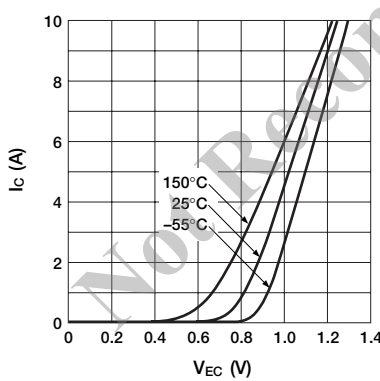
■ h<sub>FE</sub>—I<sub>c</sub> Temperature Characteristics (typ.) (V<sub>CE</sub>=1V)



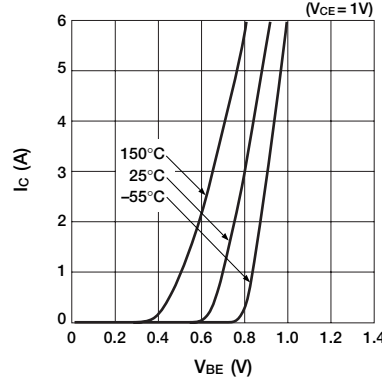
■ V<sub>CE(sat)</sub>—I<sub>b</sub> Temperature Characteristics (typ.) (I<sub>c</sub>=1.2A)



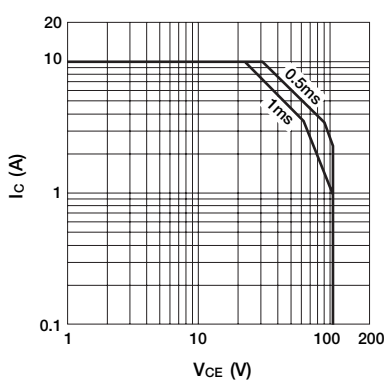
■ I<sub>c</sub>—V<sub>EC</sub> Temperature Characteristics (typ.)



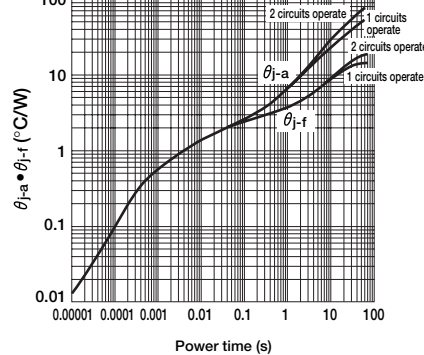
■ I<sub>c</sub>—V<sub>BE</sub> Temperature Characteristics (typ.) (V<sub>CE</sub>=1V)



■ Safe Operating Area (single pulse)



■ Transient thermal resistance characteristics (82×36×1mm at the time of mounting the recommended pattern of the glass epoxy board)



## Equivalent Circuit Diagram

