

/ Descriptions

3.0A DBF  
3.0A Surface Mount Glass Passivated Bridge Rectifier, DBF thin package.

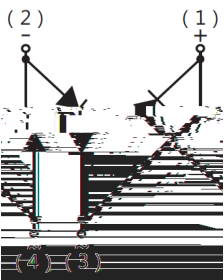
/ Features

50V~1000V 3.0A  
Glass passivated chip,High Surge Current Capability,Reverse Voltage :50 to 1000V,Forward Current: 3.0A, Designed for Surface Mount Application,HF product.

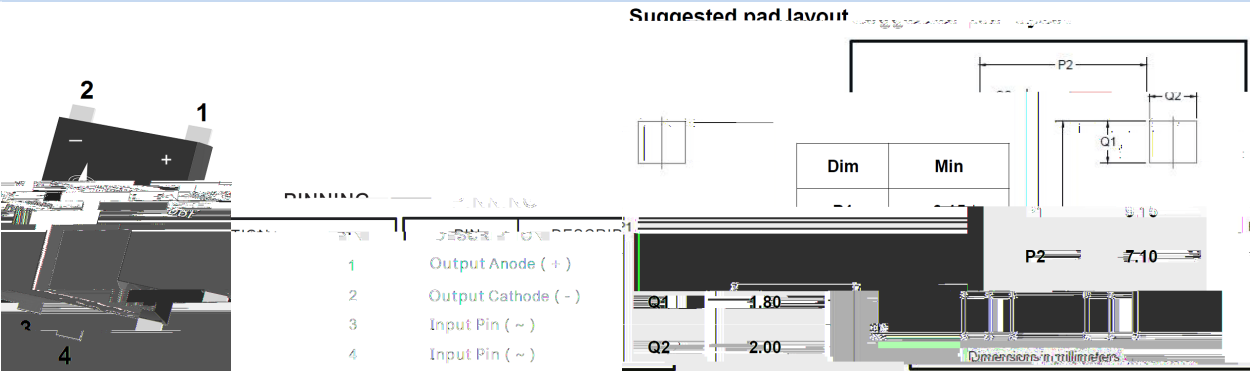
/ Applications

General purpose.

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

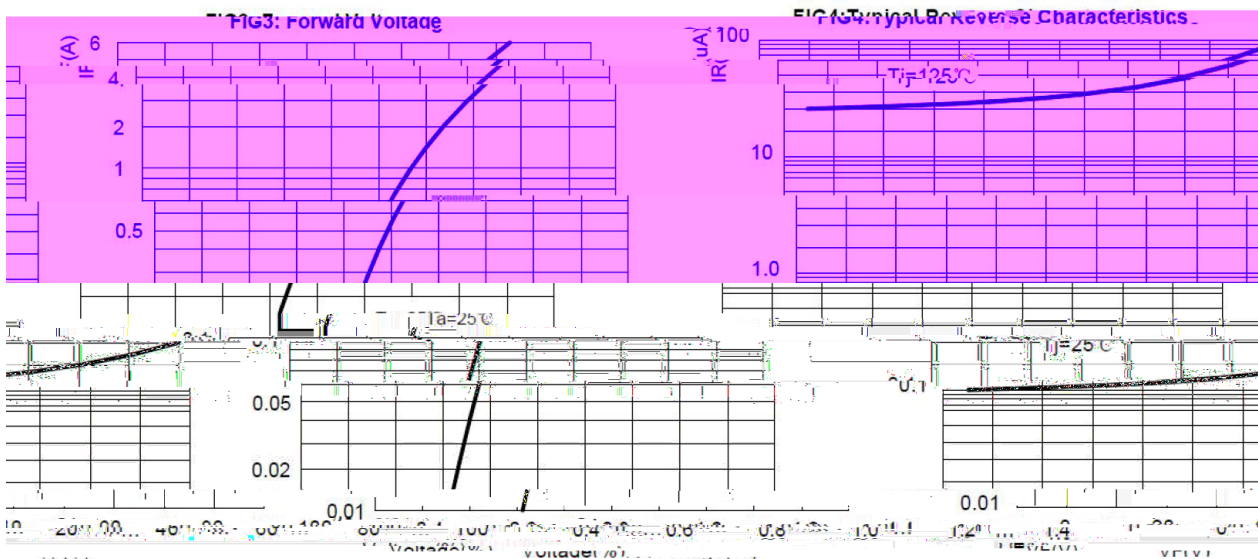
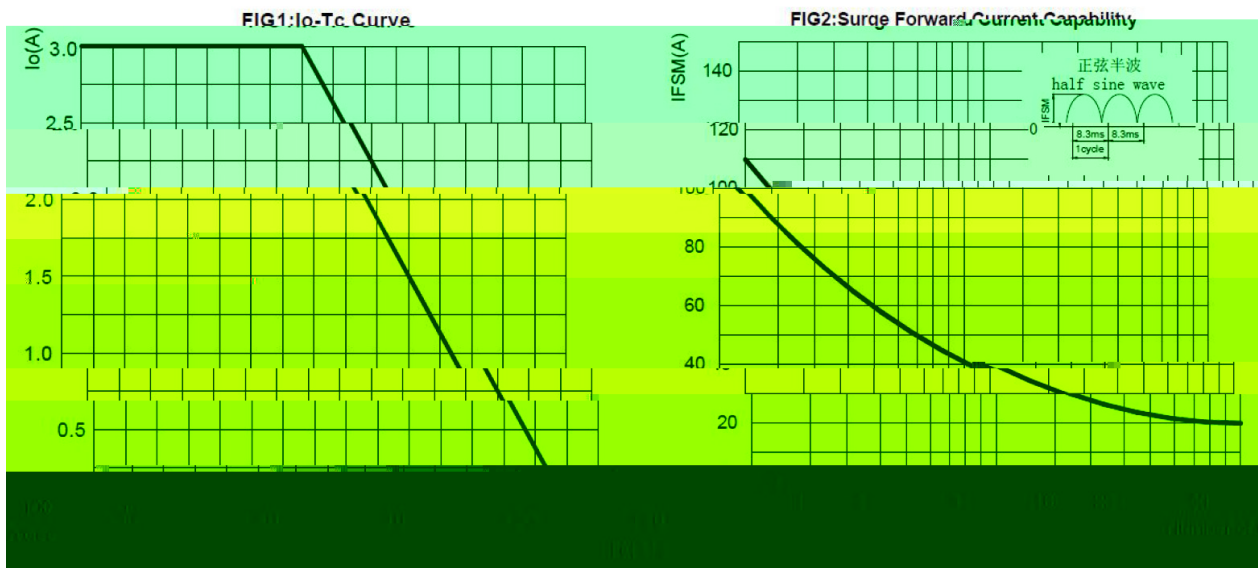
/ Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                                                                            | Symbol                            | Rating   |        |        |        |        |        |        | Unit             |
|--------------------------------------------------------------------------------------|-----------------------------------|----------|--------|--------|--------|--------|--------|--------|------------------|
|                                                                                      |                                   | DBF3005  | DBF301 | DBF302 | DBF304 | DBF306 | DBF308 | DBF310 |                  |
| Maximum Repetitive Peak Reverse Voltage                                              | V <sub>RRM</sub>                  | 50       | 100    | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum RMS Voltage                                                                  | V <sub>R(RMS)</sub>               | 35       | 70     | 140    | 280    | 420    | 560    | 720    | V                |
| Maximum DC Blocking Voltage                                                          | V <sub>DC</sub>                   | 50       | 100    | 200    | 400    | 600    | 800    | 1000   | V                |
| Maximum Average Forward Rectified Current@60HZ sine wave, R-load T <sub>C</sub> =70  | I <sub>O(AV)</sub>                | 3        |        |        |        |        |        |        | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half @60HZ,T <sub>J</sub> =25 | I <sub>FSM</sub>                  | 110      |        |        |        |        |        |        | A                |
| Current squared time@1ms ≤ t ≤ 8.3ms,T <sub>J</sub> =25 , Rating of per diode        | I <sup>2</sup> t                  | 50.2     |        |        |        |        |        |        | A <sup>2</sup> s |
| Typical Thermal Resistance perleg                                                    | R <sub>θJA</sub>                  | 55       |        |        |        |        |        |        | /<br>W           |
|                                                                                      | R <sub>θJL</sub>                  | 15       |        |        |        |        |        |        |                  |
|                                                                                      | R <sub>θJC</sub>                  | 10       |        |        |        |        |        |        |                  |
| Operating and Storage Temperature Range                                              | T <sub>J</sub> , T <sub>stg</sub> | -55~+150 |        |        |        |        |        |        |                  |

/ Electrical Characteristics( $T_a=25^\circ\text{C}$ )

| Parameter                                         | Symbol   | Test Conditions         | Rating | Unit          |
|---------------------------------------------------|----------|-------------------------|--------|---------------|
| Maximum instantaneous forward voltage             | $V_{FM}$ | $I_F=1.5\text{A}$       | 1.0    | V             |
|                                                   |          | $I_F=3.0\text{A}$       | 1.1    |               |
| Peak Reverse Current At Rated DC Blocking Voltage | $I_{RM}$ | $T_J=25^\circ\text{C}$  | 5      | $\mu\text{A}$ |
|                                                   |          | $T_J=125^\circ\text{C}$ | 300    |               |

## / Electrical Characteristic Curve





/ Marking Instructions



DBF3005

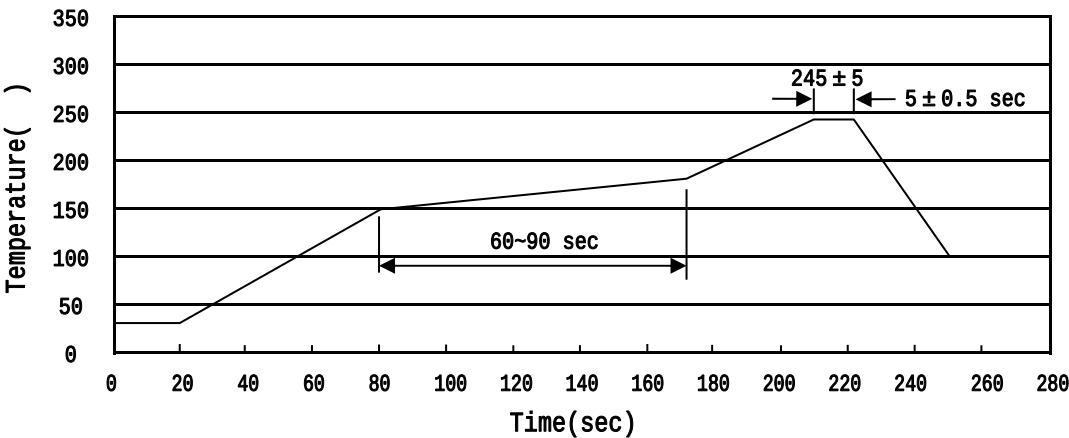
Note:

DBF3005          Product Type

Marking

| Type number | Marking code |
|-------------|--------------|
| DBF3005     | DBF3005      |
| DBF301      | DBF301       |
| DBF302      | DBF302       |
| DBF304      | DBF304       |
| DBF306      | DBF306       |
| DBF308      | DBF308       |
| DBF310      | DBF310       |

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5                      10±1 sec.                      Temp.:260±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                              | Inner Box  | Outer Box   |
| DBF          | 3,000      | 2               | 6,000           | 6                     | 36,000          | 13"×16                            | 337×337×49 | 380×335×366 |

/ Notices