

## 1.0A Surface Mount Bridge Rectifier

### Features

- Glass passivated chip junction
- Low forward voltage drop
- High surge current capability
- Ideal for printed circuit boards
- Designed for surface mount application
- High temperature soldering guaranteed: 260°C/10 seconds  
0.375" (9.5mm) lead length at 5lbs.(2.3kg) tension
- RoHS compliant



DFS



### Mechanical Data

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| <b>Case:</b>      | DFS, Molded plastic body over passivated junction        |
| <b>Epoxy:</b>     | Plastic package has UL flammability classification 94V-0 |
| <b>Terminals:</b> | Plated leads solderable per MIL-STD-202, method 208      |
| <b>Polarity:</b>  | As marked on body                                        |
| <b>Weight:</b>    | 0.014 ounce, 0.4 grams                                   |

### Maximum Ratings And Electrical Characteristics (T<sub>amb</sub>=25°C)

| Symbol                           | Description                               | DF 005S | DF 01S | DF 02S | DF 04S | DF 06S | DF 08S | DF 10S | DF 12S | Unit               | Conditions                                                       |
|----------------------------------|-------------------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------------------|------------------------------------------------------------------|
| <b>V<sub>RRM</sub></b>           | Maximum Repetitive Peak Reverse Voltage   | 50      | 100    | 200    | 400    | 600    | 800    | 1000   | 1200   | V                  |                                                                  |
| <b>V<sub>RMS</sub></b>           | Maximum RMS Voltage                       | 35      | 70     | 140    | 280    | 420    | 560    | 700    | 840    | V                  |                                                                  |
| <b>V<sub>DC</sub></b>            | Maximum DC Blocking Voltage               | 50      | 100    | 200    | 400    | 600    | 800    | 1000   | 1200   | V                  |                                                                  |
| <b>I<sub>F(AV)</sub></b>         | Maximum Average Forward Rectified Current | 1.0     |        |        |        |        |        |        |        | A                  | T <sub>A</sub> =40° C<br>Note 1                                  |
| <b>I<sub>FSM</sub></b>           | Peak Forward Surge Current                | 50      |        |        |        |        |        |        |        | A                  | 8.3ms Single Sine-wave Superimposed on Rated Load (JEDEC Method) |
| <b>I<sup>2</sup><sub>t</sub></b> | Rating for Fusing (t<8.3ms)               | 10      |        |        |        |        |        |        |        | A <sup>2</sup> sec |                                                                  |

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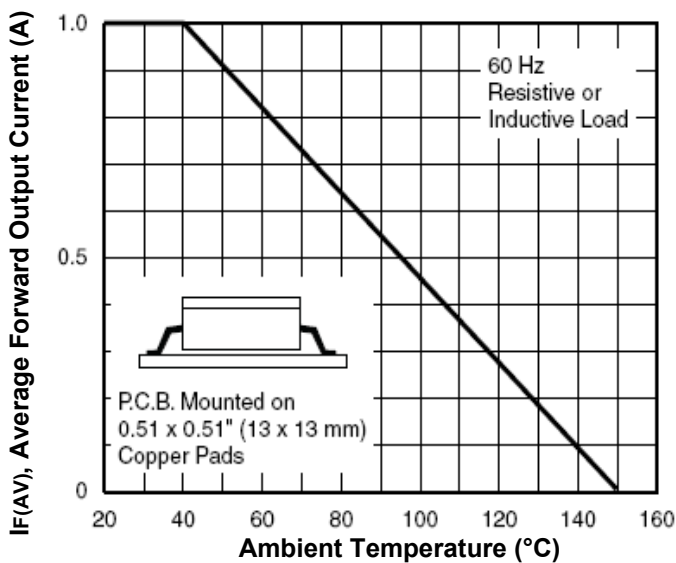
## DF005S – DF12S

| Symbol                           | Description                                                     | DF 005S     | DF 01S | DF 02S | DF 04S | DF 06S | DF 08S | DF 10S | DF 12S | Unit | Conditions                 |
|----------------------------------|-----------------------------------------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|------|----------------------------|
| V <sub>F</sub>                   | Maximum Instantaneous Forward Voltage Drop per leg              | 1.1         |        |        |        |        |        |        |        | V    | I <sub>F</sub> =1.0A       |
| I <sub>R</sub>                   | Maximum DC Reverse Current at Rated DC Blocking Voltage per leg | 5.0         |        |        |        |        |        |        |        | μA   | T <sub>A</sub> =25°C       |
|                                  |                                                                 | 500         |        |        |        |        |        |        |        |      | T <sub>A</sub> =125°C      |
| C <sub>J</sub>                   | Typical Junction Capacitance per leg                            | 25          |        |        |        |        |        |        |        | pF   | V <sub>R</sub> =4V, f=1MHz |
| R <sub>θJA</sub>                 | Typical Thermal Resistance per leg                              | 40          |        |        |        |        |        |        |        | °C/W | Note 1                     |
| R <sub>θJL</sub>                 |                                                                 | 15          |        |        |        |        |        |        |        |      |                            |
| T <sub>J</sub> ,T <sub>STG</sub> | Operating Junction and Storage Temperature Range                | -55 to +150 |        |        |        |        |        |        |        | °C   |                            |

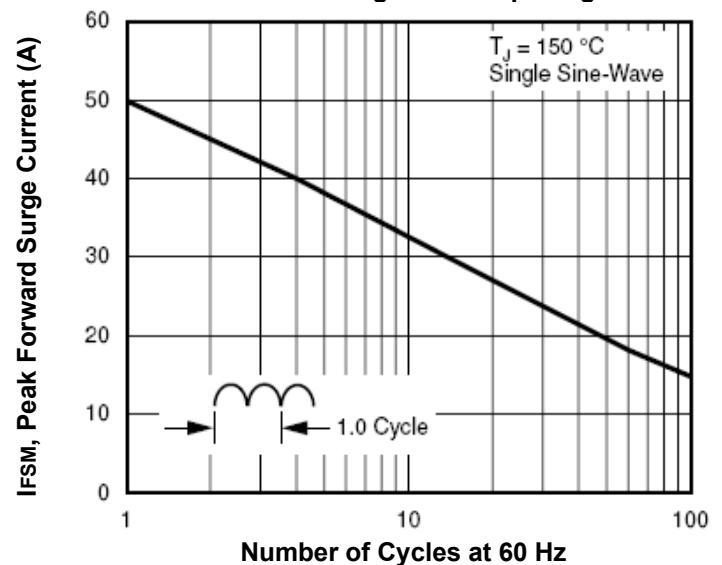
**Note:** 1.Units mounted on P.C.B. with 0.51 x 0.51" (13 x 13mm) copper pads.

### Rating and Characteristic Curves

**Fig.1- Derating Curve Output Rectified Current**



**Fig.2-Maximum Non-Repetitive Peak Forward Surge Current per leg**



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Fig.3-Typical Forward Characteristics per leg

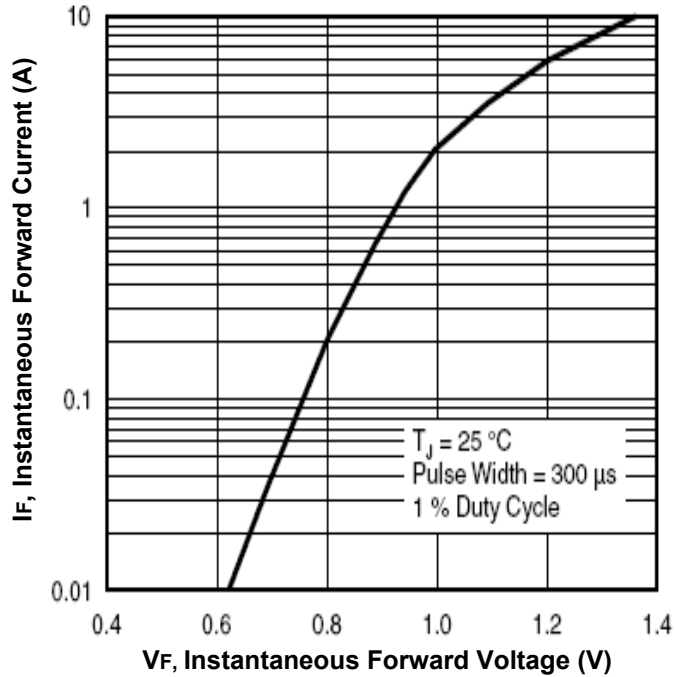


Fig.4-Typical Reverse Leakage Characteristics per leg

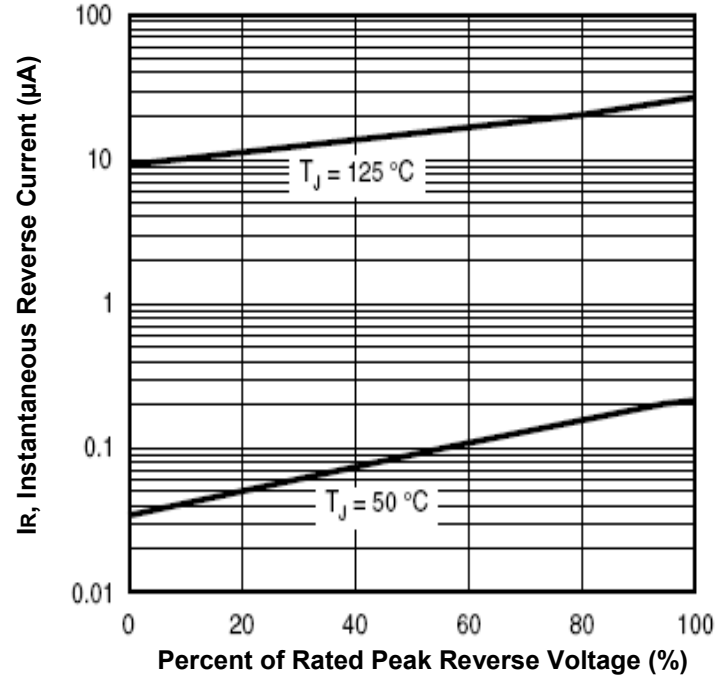
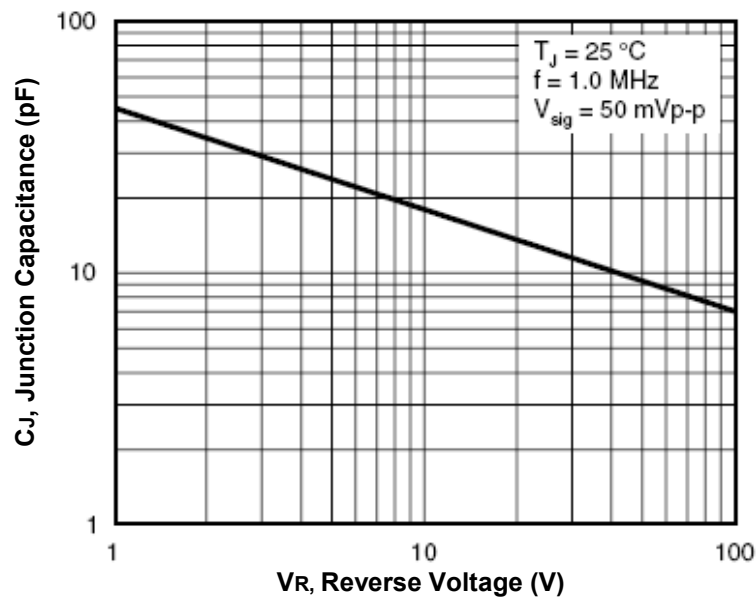


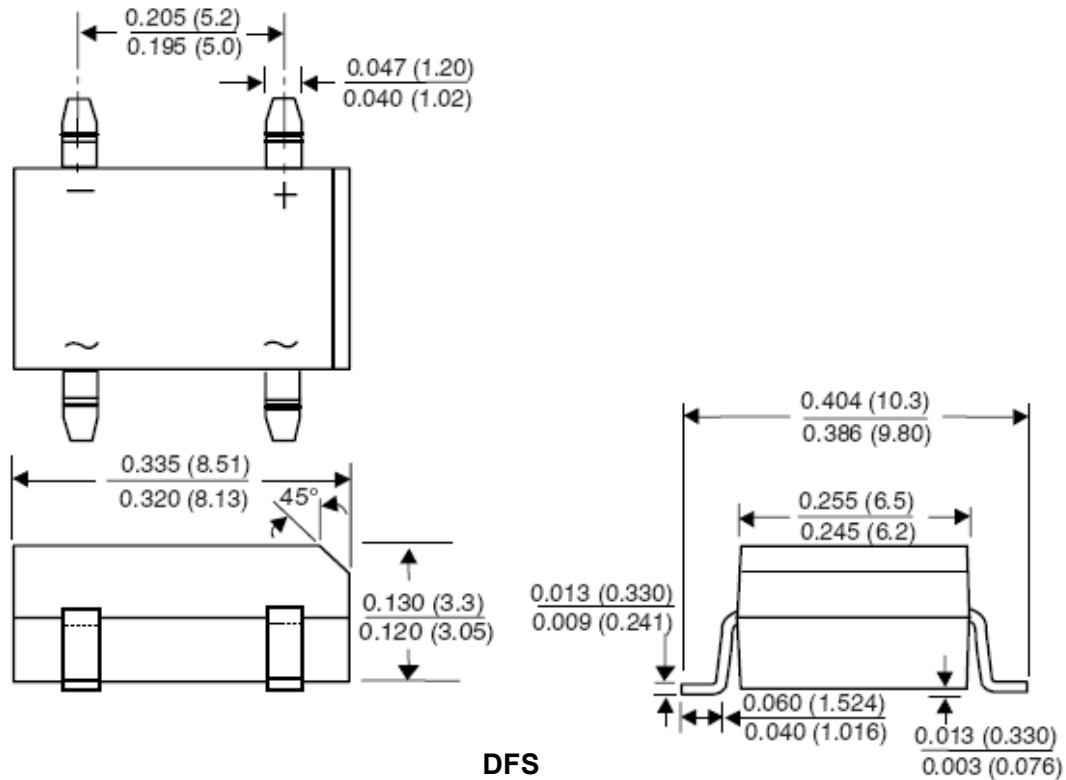
Fig.5- Typical Junction Capacitance per leg



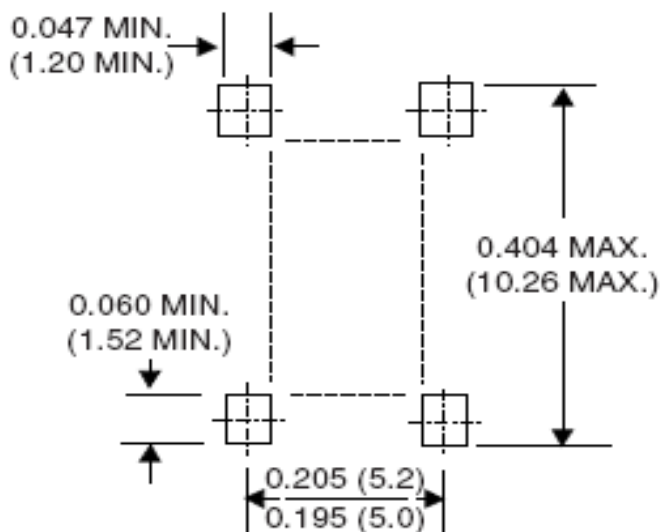
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## Dimensions in inch (mm)



## Mounting Pad Layout in inch (mm)



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## How to contact us:

### **US HEADQUARTERS**

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 824-8766 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: [taitron@taitroncomponents.com](mailto:taitron@taitroncomponents.com)

Http://[www.taitroncomponents.com](http://www.taitroncomponents.com)

### **TAITRON COMPONENTS MEXICO, S.A .DE C.V.**

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.  
42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

### **TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA**

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

### **TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE**

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931