

# PART OBSOLETE - EOL18


International  
**IR** Rectifier

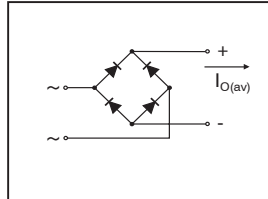
Bulletin U2788 rev. G 04/03

## DF SERIES

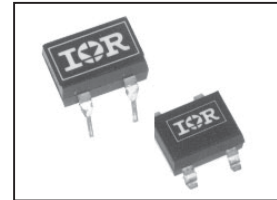
### 1A Single Phase D.I.L. Rectifier Bridge

#### Features

- Glass passivated chips
- Leads on standard 0.1" grid
- Suitable for automatic insertion
- High surge current capability
- Fully characterised data
- Wide temperature range
- Surface mount option
- Lead free terminals solderable as per MIL-STD-750 Method 2026
- High temperature soldering guaranteed 260°C/8-10 secs
- Polarity symbols marked on the case
- UL E160375 approved 



$I_{O(av)} = 1.0 \text{ A}$   
 $V_{RRM}$  range  
50 to 1000V



#### Description

The DF Series of Single Phase Rectifier Bridges consists of four silicon junctions encapsulated in a 4 pin D.I.L. package. These devices are intended for general use in industrial and consumer equipment.

#### Electrical Specification

		DF...	Units	Conditions
$I_O$	Maximum DC output current	1.0	A	$T_{amb} = 40^\circ\text{C}$ , Resistive or inductive load
		0.8	A	$T_{amb} = 40^\circ\text{C}$ , Capacitive load
$I_{FSM}$	Maximum peak one cycle, non-repetitive surge current	30	A	$t = 10\text{ms}, 20\text{ms}$
		31	A	$t = 8.3\text{ms}, 16.7\text{ms}$
$I^2t$	Maximum $I^2t$ capability for fusing	4.5	$\text{A}^2\text{s}$	$t = 10\text{ms}$
		4.1	$\text{A}^2\text{s}$	$t = 8.3\text{ms}$
		6.4	$\text{A}^2\text{s}$	$t = 10\text{ms}$
		5.8	$\text{A}^2\text{s}$	$t = 8.3\text{ms}$
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ capability for fusing	64	$\text{A}^2\sqrt{\text{s}}$	$t = 0.1$ to $10\text{ms}$ , no voltage reapplied
$V_{FM}$	Maximum peak forward voltage per diode	1.0	V	$I_{FM} = 1.0\text{A}$ , $T_J = 25^\circ\text{C}$
$I_{RM}$	Typical peak reverse leakage per diode	5	$\mu\text{A}$	$T_J = 25^\circ\text{C}$ , 100% $V_{RRM}$
		100	$\mu\text{A}$	$T_J = 150^\circ\text{C}$ , 100% $V_{RRM}$
$f$	Operating frequency range	50 to 1000	Hz	
$V_{RRM}$	Maximum repetitive peak reverse voltage range	50 to 1000	V	

#### Thermal and Mechanical Specifications

		DF...	Units	Conditions
$T_J$	Operating and storage temperature range	- 55 to 150	$^\circ\text{C}$	
$T_{stg}$	Storage temperature range			
$R_{thJA}$	Thermal resistance, junctions to ambient	60	K/W	
W	Approximate weight	0.6 (0.02)	g (oz)	

**Voltage Specifications**

Part Number	$V_{RRM}$ . Maximum repetitive peak reverse voltage V	$V_{RSM}$ . Maximum non-repetitive peak reverse voltage V
DF005M/DF005S	50	80
DF01M/DF01S	100	150
DF02M/DF02S	200	300
DF04M/DF04S	400	500
DF06M/DF06S	600	700
DF08M/DF08S	800	900
DF10M/DF10S	1000	1100

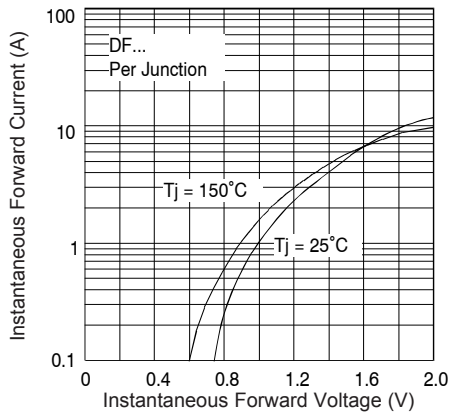


Fig. 1 - Forward Characteristics

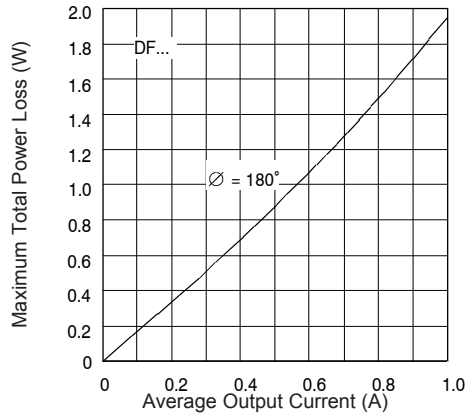


Fig. 2 - Power Loss Characteristics

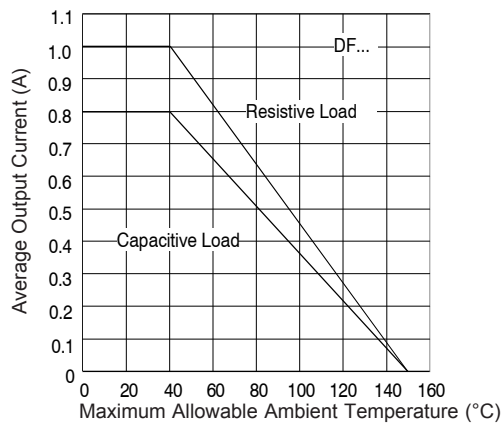


Fig. 3 - Current Ratings

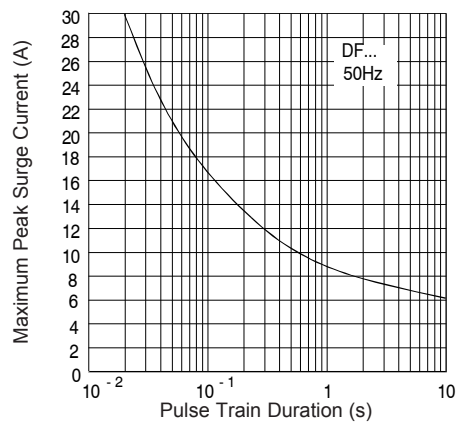
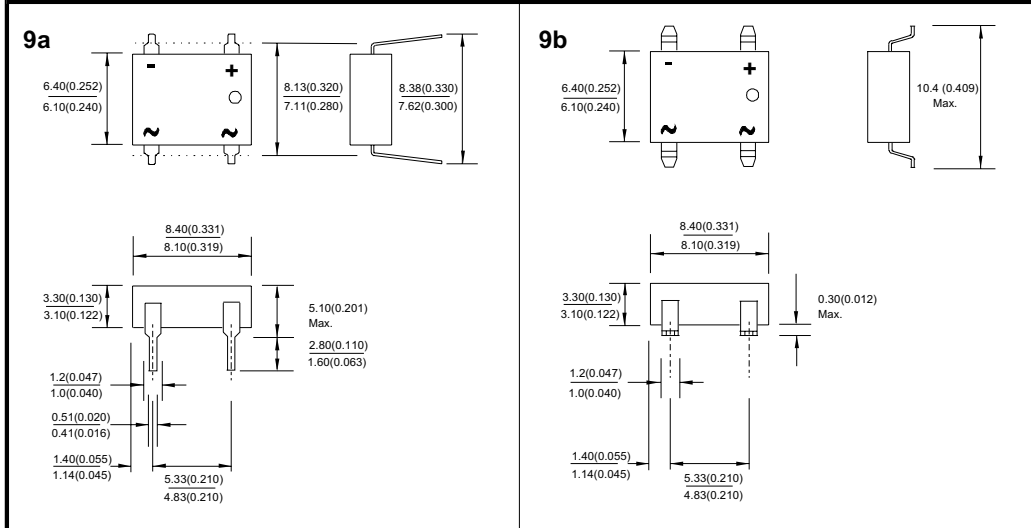


Fig. 4 - Non-Repetitive Surge Ratings

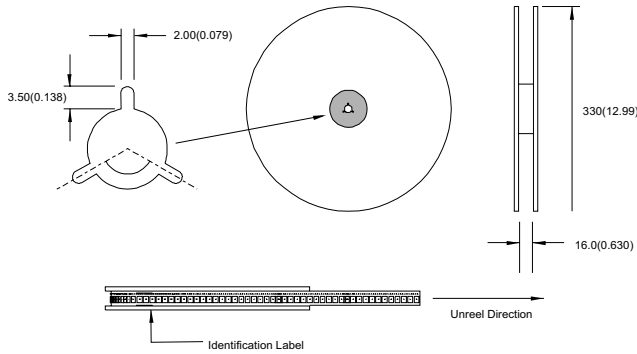
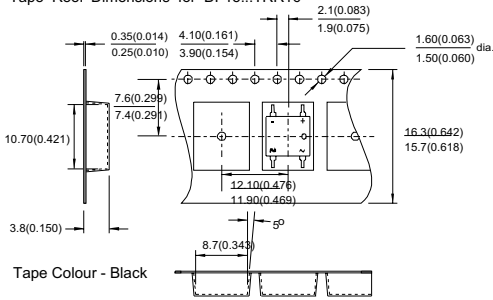
DF..M

DF..S

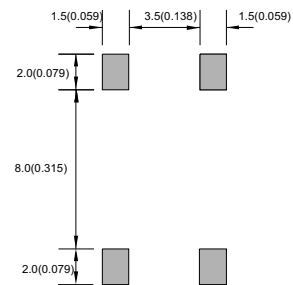


Tape Reel

Tape Reel Dimensions for DF15...TRR16



Footprint and Pad Dimensions



All dimensions in millimetres(inches)

## DF SERIES

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**IOR** Rectifier

### Ordering Information Table

Device Code		
<b>DF</b>	<b>10</b>	<b>S</b>
①	②	③

<b>1</b>	-	Basic Part Number
<b>2</b>	-	Voltage Code: Code x 100 = $V_{RRM}$
<b>3</b>	-	Terminal Type: M = hole mount S = surface mount

To specify tape reel option add ' TRR16' suffix. e.g. DF10STRR16

Data and specifications subject to change without notice.  
This product has been designed and qualified for Multiple Level.  
Qualification Standards can be found on IR's Web site.

International  
**IOR** Rectifier

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Visit us at [www.irf.com](http://www.irf.com) for sales contact information. 04/03