

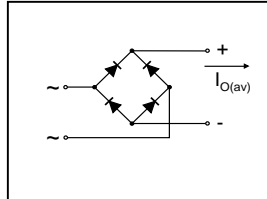
# International IOR Rectifier

## DF SERIES

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

#### Features

- 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
- ULE215862 approved



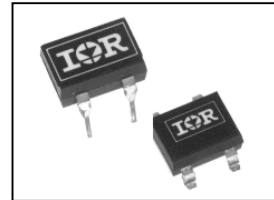
$$I_{O(av)} = 1.0 \text{ A}$$

$$V_{RRM} \text{ range}$$

$$50 \text{ to } 1000 \text{ V}$$

#### 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	$\text{A}^2\sqrt{\text{s}}$	$t = 0.1 \text{ to } 10\text{ms}$ , 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
$T_J$ $T_{stg}$	Operating and storage temperature range	- 55 to 150	$^\circ\text{C}$	
$R_{thJA}$	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

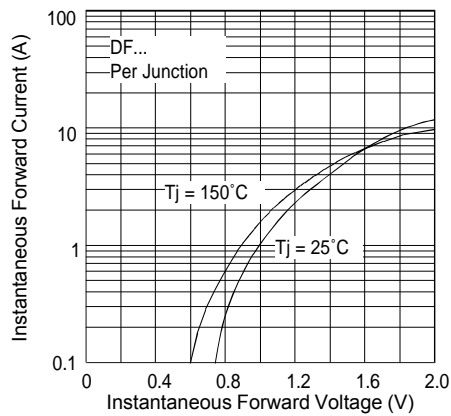


Fig. 1 - Forward Characteristics

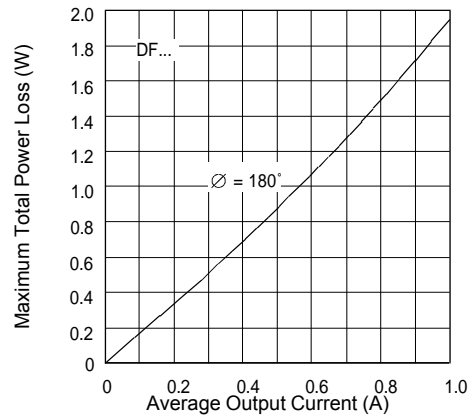


Fig. 2 - Power Loss Characteristics

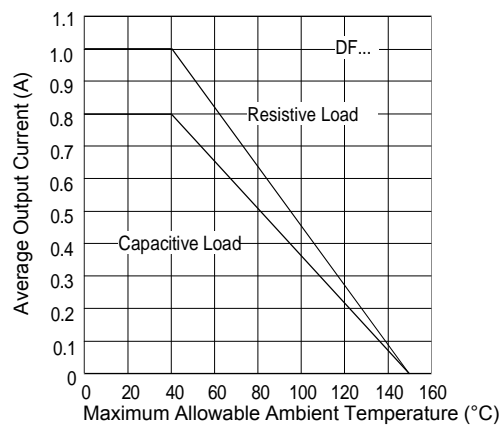


Fig. 3 - Current Ratings

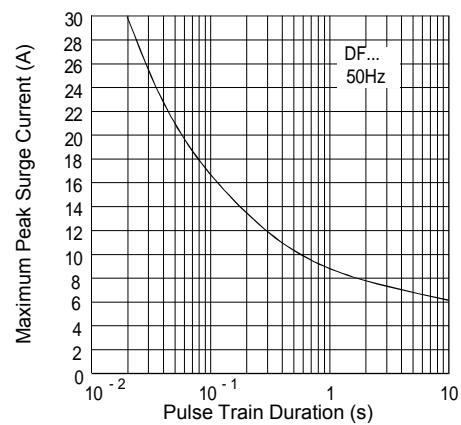
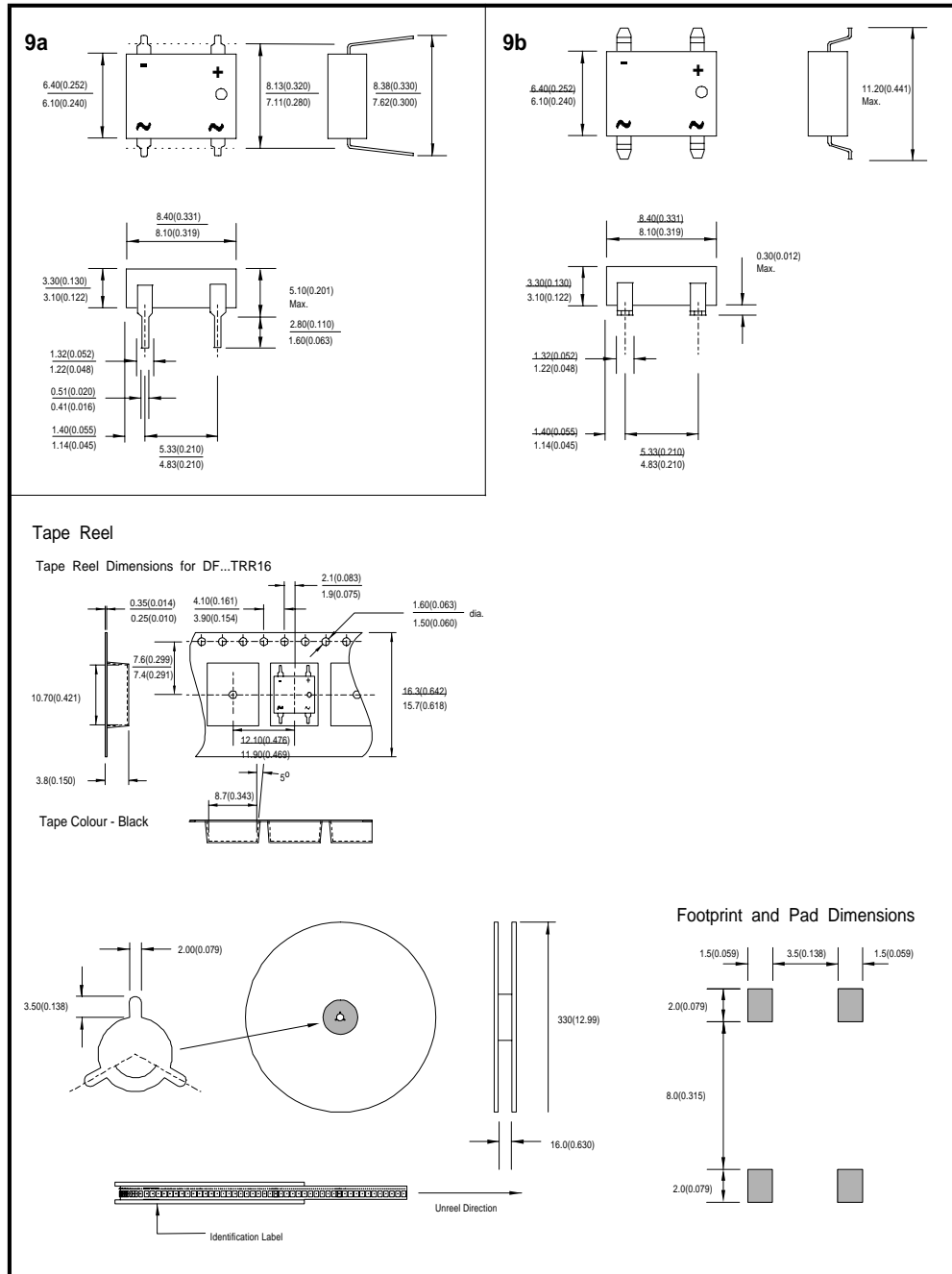


Fig. 4 - Non-Repetitive Surge Ratings

**DF...**

**DF...S**



All dimensions in millimetres(inches)

## DF SERIES

Bulletin U2788 rev. F 08/01

International  
**IR** Rectifier

### Ordering Information Table

Device Code		
DF	10	S
1	2	3
1	-	Basic Part Number
2	-	Voltage Code: Code x 100 = $V_{RRM}$
3	-	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  
**IR** Rectifier

**IR WORLD HEADQUARTERS:** 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105  
TAC Fax: (310) 252-7309  
Visit us at [www.irf.com](http://www.irf.com) for sales contact information. 08/01