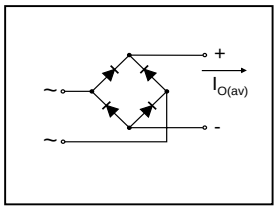
International
IOR Rectifier

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 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°C, Resistive or inductive load	
		0.8	A	T_{amb} = 40°C, Capacitive load	
I_{FSM}	Maximum peak one cycle, non-repetitive surge current	30	A	t = 10ms, 20ms	Following any rated load condition and with rated V_{RRM} reapplied
		31	A	t = 8.3ms, 16.7ms	
I^2t	Maximum I^2t capability for fusing	4.5	A^2s	t = 10ms	Initial $T_J = T_J$ max 100% V_{RRM} reapplied
		4.1	A^2s	t = 8.3ms	
		6.4	A^2s	t = 10ms	Initial $T_J = T_J$ max no voltage reapplied
		5.8	A^2s	t = 8.3ms	
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ capability for fusing	64	$A^2\sqrt{s}$	t = 0.1 to 10ms, no voltage reapplied	
V_{FM}	Maximum peak forward voltage per diode	1.0	V	I_{FM} = 1.0A, T_J = 25°C	
I_{RM}	Typical peak reverse leakage per diode	5	µA	T_J = 25°C, 100% V_{RRM}	
		100	µA	T_J = 150°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	°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

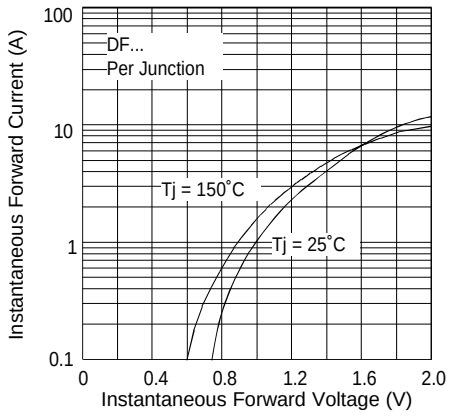


Fig. 1 - Forward Characteristics

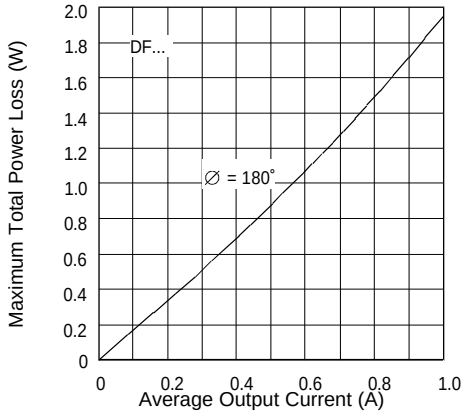


Fig. 2 - Power Loss Characteristics

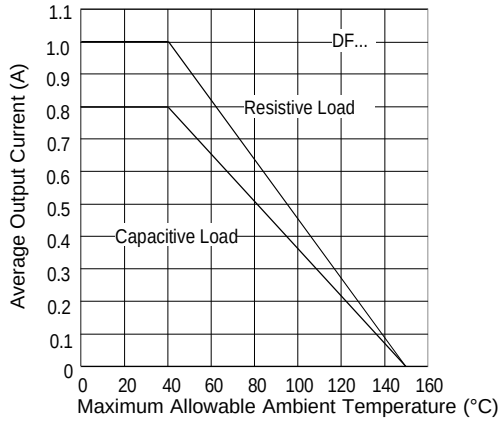


Fig. 3 - Current Ratings

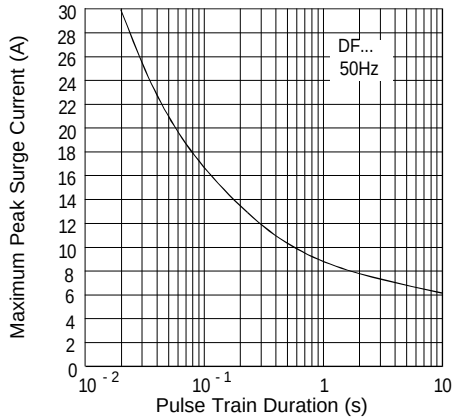
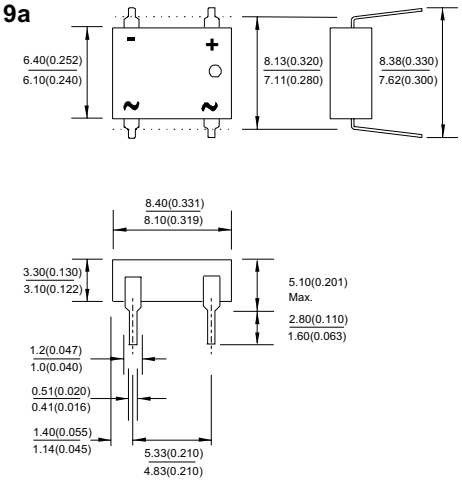


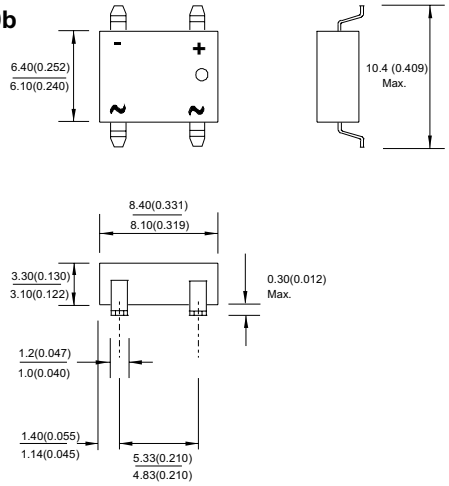
Fig. 4 - Non-Repetititive Surge Ratings

DF..M **DF..S**

9a

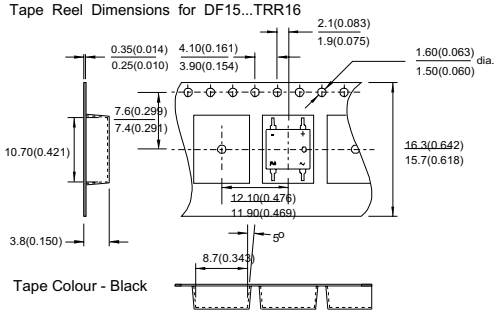


9b

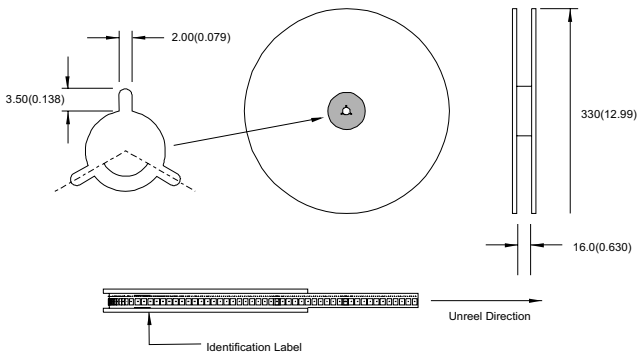


Tape Reel

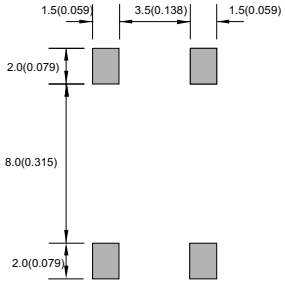
Tape Reel Dimensions for DF15...TRR16



Tape Colour - Black



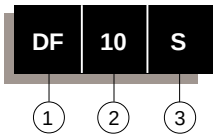
Footprint and Pad Dimensions



All dimensions in millimetres(inches)

Ordering Information Table

Device Code



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
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