

# DF005S - DF10S Bridge Rectifiers

### Features

- Surge overload rating: 50 amperes peak.
- Glass passivated junction.
- Low leakage.
- UL certified, UL #E96005.



# Absolute Maximum Ratings \* T<sub>a</sub> = 25°C unless otherwise noted

Symbol	Parameter		Value						
		005S	01S	02S	04S	06S	08S	10S	Units
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V <sub>RMS</sub>	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
V <sub>R</sub>	DC Reverse Voltage (Rated V <sub>R</sub> )	50	100	200	400	600	800	1000	V
I <sub>F(AV)</sub>	Average Recitified Forward Current @ T <sub>A</sub> = 40°C		1.5			A			
I <sub>FSM</sub>	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		50			А			
T <sub>STG</sub>	Storage Temperature Range		-55 to +150			°C			
TJ	Operating Junction Temperature	-55 to +150		°C					

\* These ratings are limiting values above which the serviceability of any semiconductor device may by impaired.

#### **Thermal Characteristics**

Symbol	Parameter	Value	Units	
PD	Power Dissipation	3.1	W	
$R_{ hetaJA}$	Thermal Resistance, Junction to Ambient, * per leg	40	°C/W	

\* Device mounted on PCB with 0.5  $\times$  0.5" (13  $\times$  13mm).

### Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>F</sub>	Forward Voltage, per element @ 1.0A	1.1	V
I <sub>R</sub>	Reverse Current, per element @ Rated $V_R$ $T_A = 25^{\circ}C$ $T_A = 125^{\circ}C$	50 500	μΑ μΑ
	$I^{2}t$ Rating for Fusing t < 8.35ms	10	A <sup>2</sup> s
CT	Total Capacitance, per leg $V_R = 4.0v$ , f = 1.0MHz	25	pF

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## **Typical Performance Characteristics**

#### Figure 1.



1.5

1

0.5

0 L 20

40

60

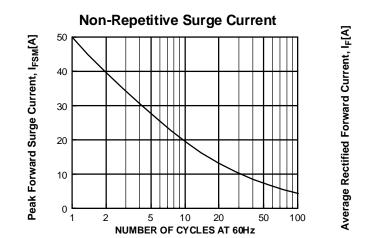
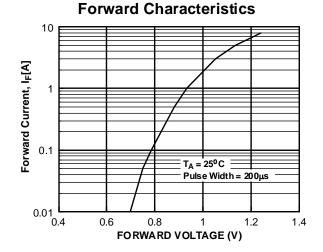


Figure 3.



Reverse Current, I<sub>R</sub>[µA]





80

100

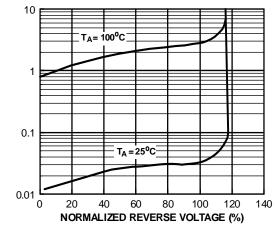
AMBIENT TEMPERATURE (° C)

120

140

160

**Output Rectified Current** 





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