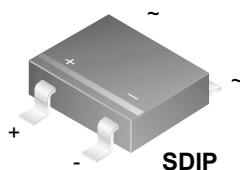


# DF005S - DF10S Bridge Rectifiers

## Features

- Surge overload rating: 50 amperes peak.
- Glass passivated junction.
- Low leakage.
- UL certified, UL #E111753.



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

Symbol	Parameter	Value							Units
		005S	01S	02S	04S	06S	08S	10S	
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 Rectified 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							A
T <sub>STG</sub>	Storage Temperature Range	-55 to +150							°C
T <sub>J</sub>	Operating Junction Temperature	-55 to +150							°C

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

## Thermal Characteristics

Symbol	Parameter	Value	Units
P <sub>D</sub>	Power Dissipation	3.1	W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient, * per leg	40	°C/W

\* Device mounted on PCB with 0.5 × 0.5" (13 × 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 <sub>R</sub> T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	50 500	μA μA
	I <sup>2</sup> t Rating for Fusing t < 8.35ms	10	A <sup>2</sup> s
C <sub>T</sub>	Total Capacitance, per leg V <sub>R</sub> = 4.0v, f = 1.0MHz	25	pF

Typical Performance Characteristics

Figure 1. Non-Repetitive Surge Current

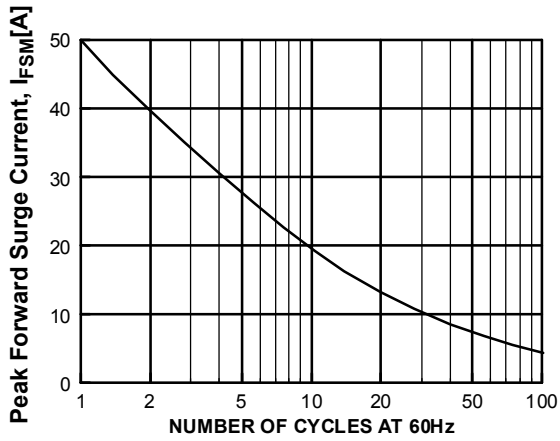


Figure 2. Forward Current Derating Curve

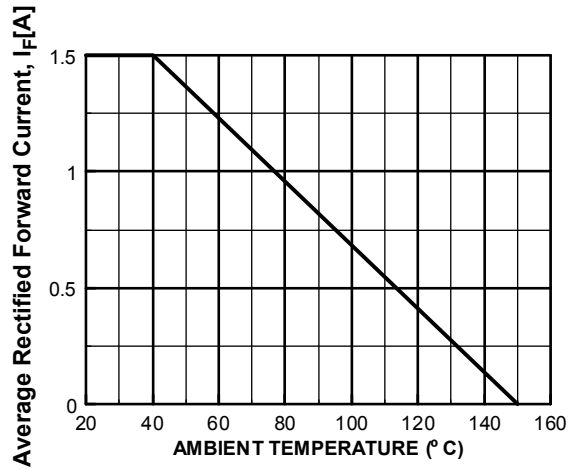


Figure 3. Forward Voltage Characteristics

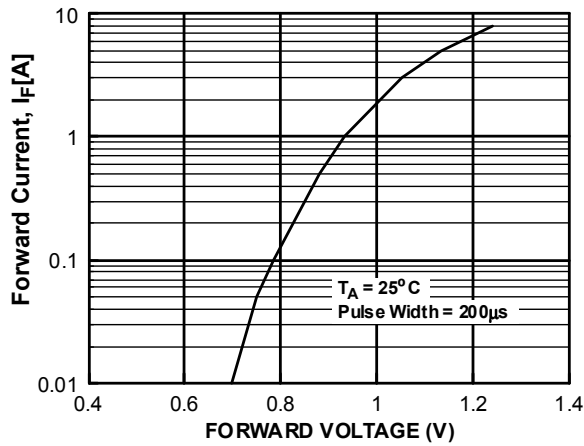
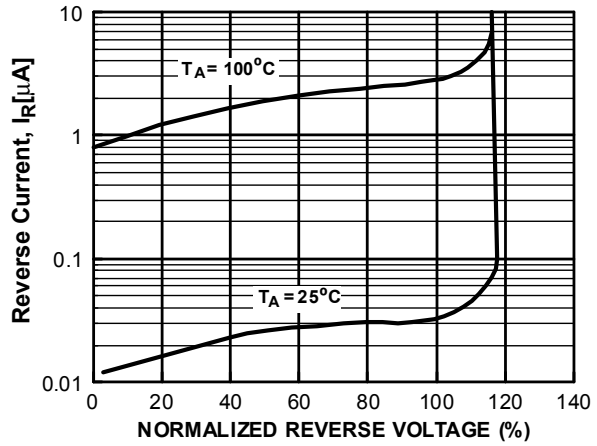


Figure 4. Reverse Current vs Reverse Voltage



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E <sup>2</sup> CMOS™	I <sup>2</sup> C™	MSX™	QT Optoelectronics™	TinyLogic®
EnSigna™	i-Lo™	MSXPro™	Quiet Series™	TINYOPTO™
FACT™	ImpliedDisconnect™	OCX™	RapidConfigure™	TruTranslation™
FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
Across the board. Around the world.™		OPTOLOGIC®	μSerDes™	UltraFET®
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Programmable Active Droop™		PACMAN™	SMART START™	VCX™

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