

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	DF 005S	DF 01S	DF 02S	DF 04S	DF 06S	DF 08S	DF 10S	Unit
Peak Repetitive Reverse Voltage	V <sub>RMM</sub>	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Average Forward Rectified Current @ T <sub>A</sub> = +40°C	I <sub>O</sub>	1.0							A
Non-Repetitive Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	50							A

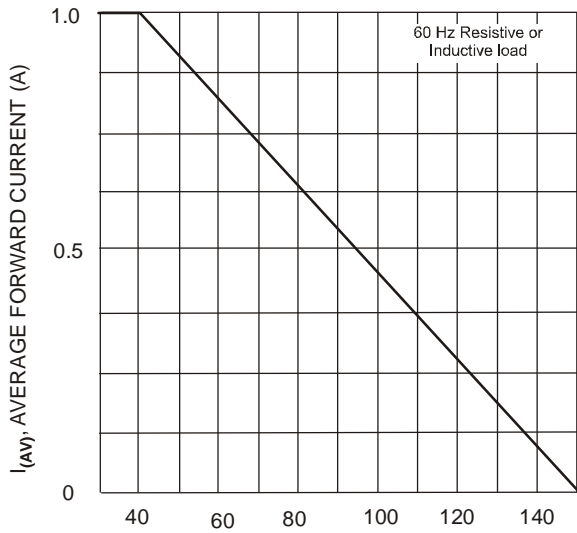
**Thermal Characteristics**

Characteristic	Symbol	DF 005S	DF 01S	DF 02S	DF 04S	DF 06S	DF 08S	DF 10S	Unit
Typical Thermal Resistance, Junction to Ambient (Note 6)	R <sub>θJA</sub>	40							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

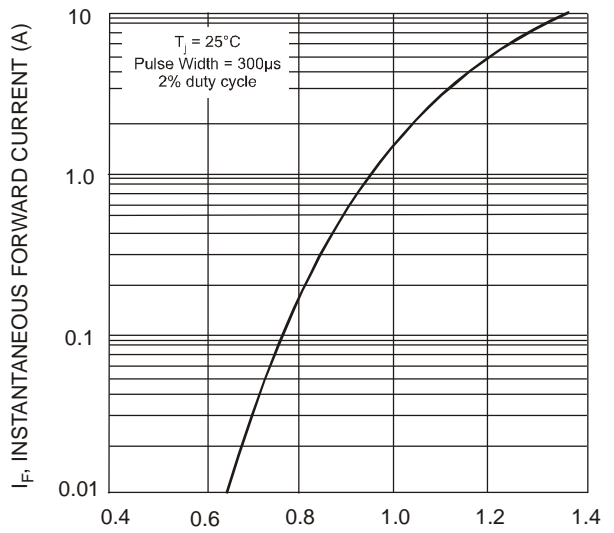
**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	DF 005S	DF 01S	DF 02S	DF 04S	DF 06S	DF 08S	DF 10S	Unit
Forward Voltage (Per Element) @ I <sub>F</sub> = 1.0A	V <sub>FM</sub>	1.1							V
Peak Reverse Current at Rated @ T <sub>A</sub> = +25°C	I <sub>RM</sub>	10							μA
DC Blocking Voltage (Per Element) @ T <sub>A</sub> = +125°C		500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	10.4							A <sup>2</sup> s
Typical Total Capacitance (Per Element) (Note 5)	C <sub>T</sub>	25							pF

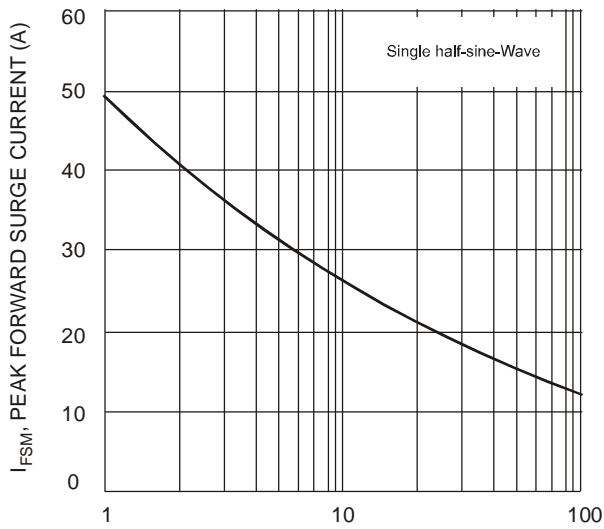
Notes: 5. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.  
6. Thermal resistance, junction to ambient, measured on PC board with 5.0mm<sup>2</sup> (0.03mm thick) land areas.



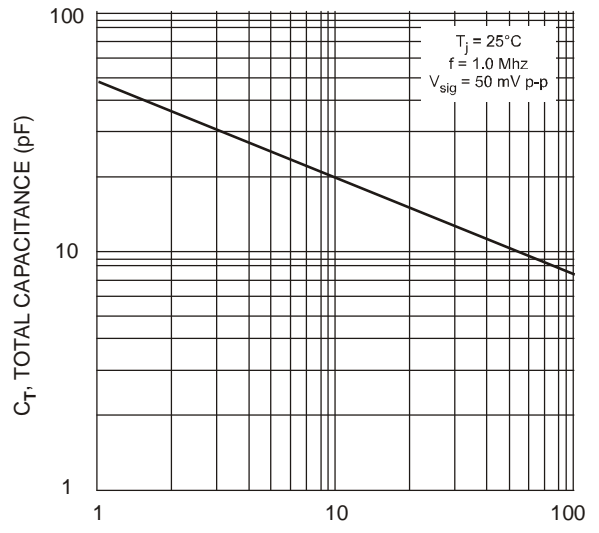
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Output Current Derating Curve



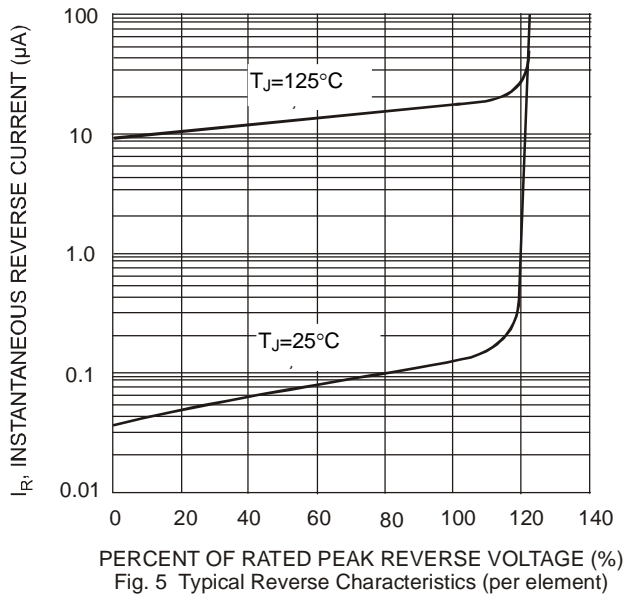
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Forward Surge Current

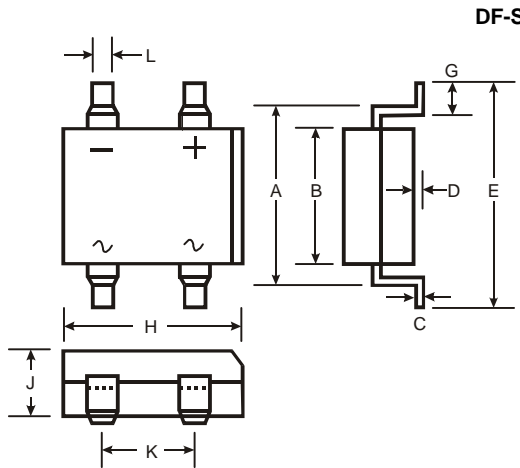


$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Total Capacitance (per element)



**Package Outline Dimensions**

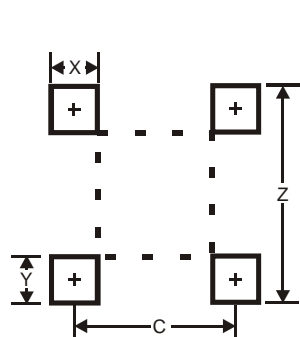
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



DF-S		
Dim	Min	Max
A	7.40	7.90
B	6.20	6.50
C	0.22	0.30
D	0.076	0.33
E	—	10.40
G	1.02	1.53
H	8.13	8.51
J	2.40	2.60
K	5.00	5.20
L	1.00	1.20
All Dimensions in mm		

**Suggested Pad Layout**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value (in mm)
Z	10.26
X	1.2
Y	1.52
C	5.2

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