DF005S - DF10S

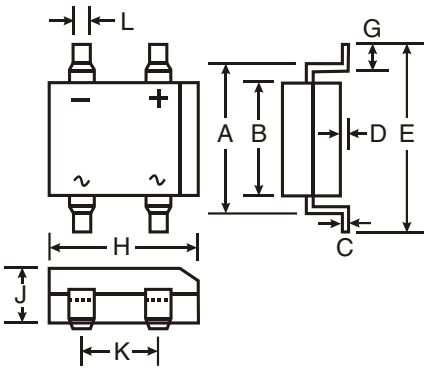
1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Surface Mount Application
- Plastic Material - UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Leads, Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 3
- Polarity: As marked on Case
- Approx. Weight: 0.38 grams
- Mounting Position: Any
- Marking: Type Number



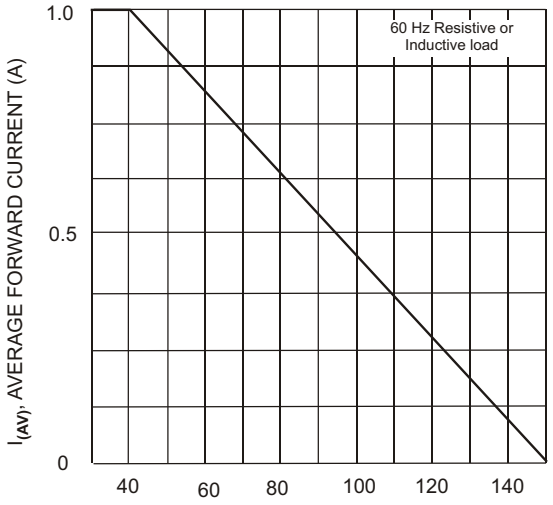
DF-S		
Dim	**Min**	**Max**
A	7.40	7.90
B	6.20	6.50
C	0.22	0.30
D	0.076	0.33
E	—	10.40
G	1.02	1.53
H	8.13	8.51
J	2.40	2.60
K	5.00	5.20
L	1.00	1.20
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

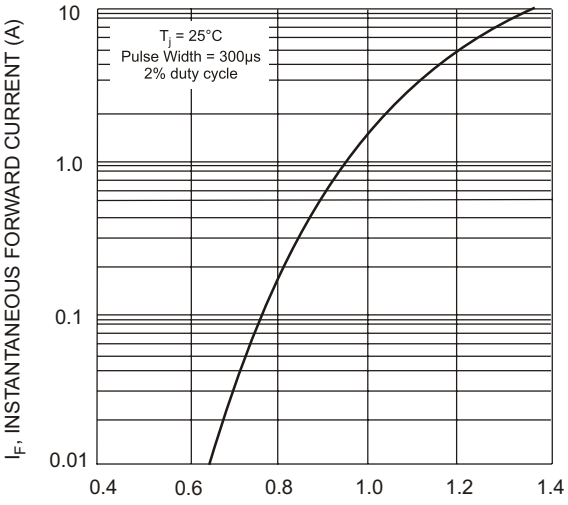
Single phase, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	DF 005S	DF 01S	DF 02S	DF 04S	DF 06S	DF 08S	DF 10S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Forward Rectified Current @ T_A = 40°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							A
Forward Voltage (per element) @ I_F = 1.0A	V_{FM}	1.1							V
Peak Reverse Current at Rated DC Blocking Voltage (per element) @ T_A = 25°C @ T_A = 125°C	I_{RM}	10 500							μA
I^2t Rating for Fusing (t<8.3ms)	I^2t	10.4							A^2s
Typical Total Capacitance (per element) (Note 1)	C_T	25							pF
Typical Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	40							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

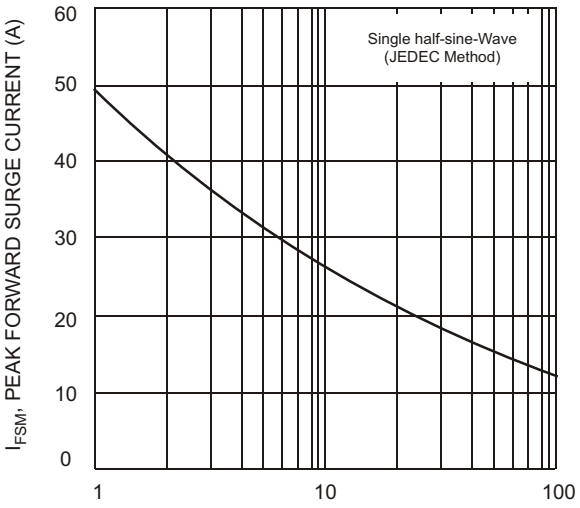
Notes: 1. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal resistance, junction to ambient, measured on PC board with 5.0mm^2 (0.03mm thick) land areas.



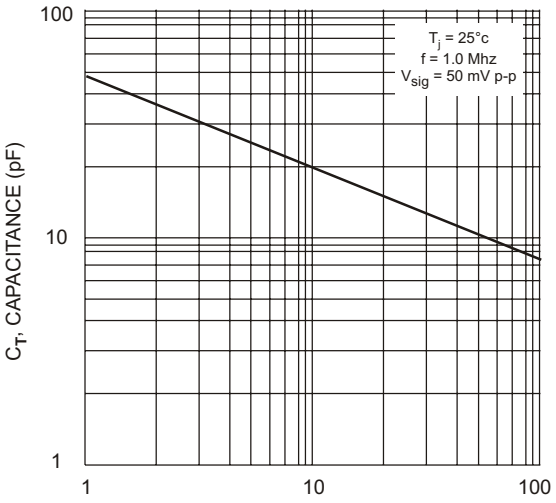
T_A, AMBIENT TEMPERATURE (°C)
Fig. 1 Output Current Derating Curve



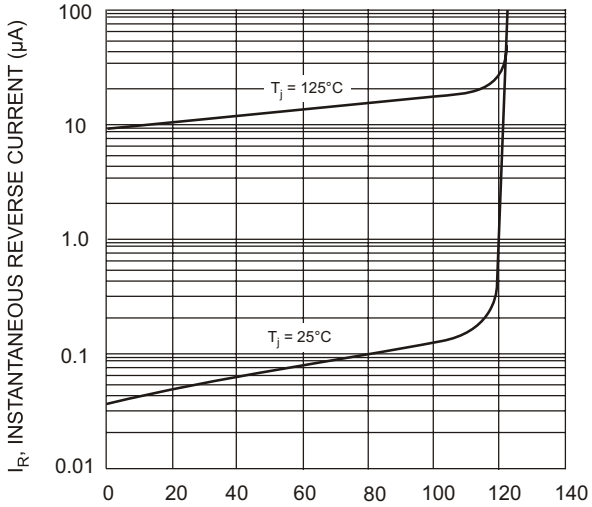
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typ Forward Characteristics (per element)



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



V_R, REVERSE VOLTAGE (V)
Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typ Reverse Characteristics (per element)

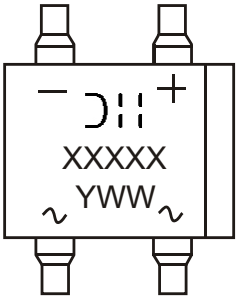
Ordering Information (Notes 3 & 4)

Device*	Packaging	Shipping
DFxS DFxS-T	DF-S DF-S	Tube 1500/Tape & Reel, 13-inch

* x = Device type, e.g. DF005S or DF10S, etc.

Notes: 3. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
4. For lead free terminal plating part number, please add "-F" suffix to part number above. Example: DF10S-T-F.

Marking Information



= Manufacturers' code marking
XXXXX = Product type marking code, ex: DF10S
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52