

1A Miniature Glass Passivated Single-Phase Bridge Rectifiers

■ Features

- Surge overload ratings to 30 amperes peak.
- Recommended for non-automatic applications.
- Ideal for & save space on printed circuit board.
- Applicable for automatic insertion.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Suffix "G" indicates Halogen-free part, ex.DF101G.
- Lead-free parts meet RoHS requirements.

■ Mechanical data

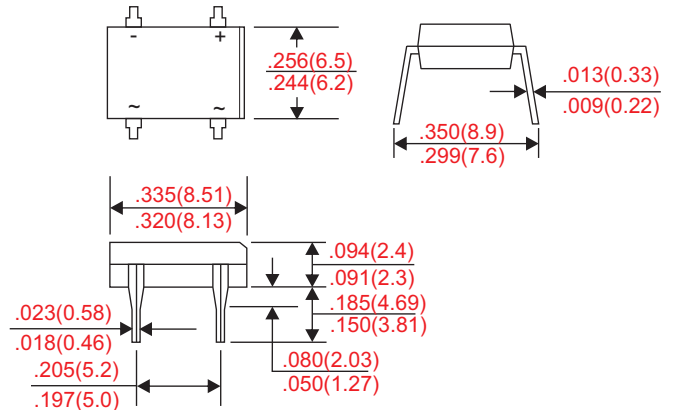
- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DF
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 0.38 gram

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

■ Outline

DF



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	at $T_A = 25^\circ\text{C}$	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			10	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				500	
Current squared time	$t < 8.3\text{ms}$, $T_J = 25^\circ\text{C}$	I^2t			3.7	A ² S
Thermal resistance	junction to ambient	R_{BJA}			68	°C/W
Storage temperature		T_{STG}	-55		+150	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V_{RRM} (V)	Max. RMS voltage V_{RMS} (V)	Max. DC blocking voltage V_R (V)	Max. forward voltage @0.5A, $T_A = 25^\circ\text{C}$ V_F (V)	Operating temperature T_J (°C)
DF101	DBL101	50	35	50	1.05	-55 ~ +150
DF102	DBL102	100	70	100		
DF103	DBL103	200	140	200		
DF104	DBL104	400	280	400		
DF105	DBL105	600	420	600		
DF106	DBL106	800	560	800		
DF107	DBL107	1000	700	1000		

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

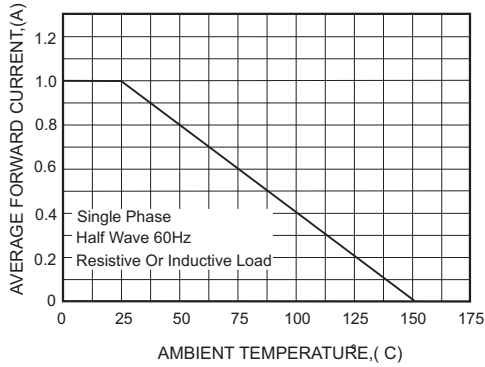


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

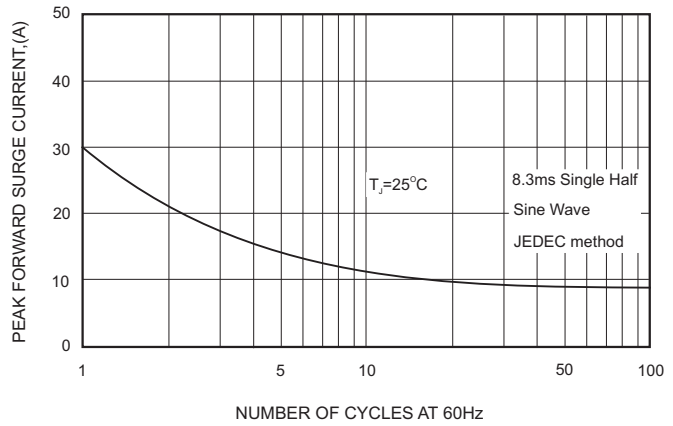


Fig. 3 - Typical Instantaneous Forward Characteristics (Per Leg)

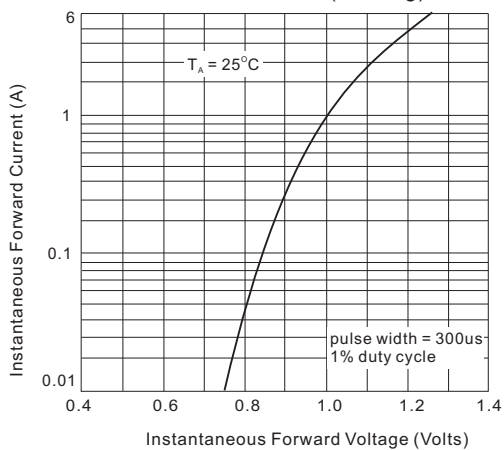
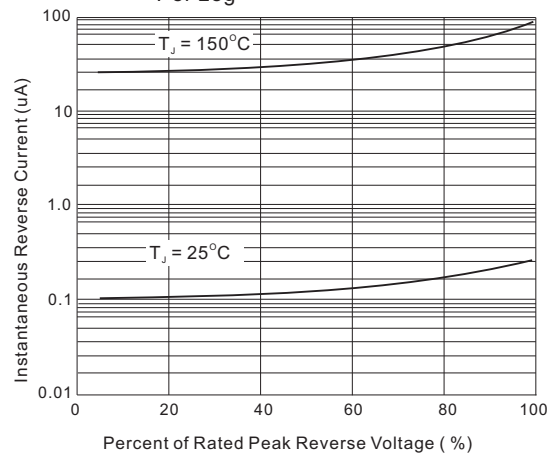


Fig. 4 - Typical Reverse Characteristics Per Leg



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