

BFGP4001W-F THRU BFGP4007W-F

1 Amperes Surface Mount Fast Recovery Rectifiers
VOLTAGE : 50 TO 1000Volts

Features	Outline
<ul style="list-style-type: none"> • Low profile surface mounted application in order to optimize board space. • Tiny plastic SMD package. • High current capability. • High surge capability. • Glass passivated chip junction. • Suffix "G" indicates Halogen-free part, ex.BFGP4001WG-F. • Lead-free parts meet environmental standards of MIL-STD-19500 /228 	<p>SOD-123F</p> <p>Dimensions in inches and (millimeters)</p>
Mechanical data	
<ul style="list-style-type: none"> • Epoxy:UL94-V0 rated flame retardant • Case : Molded plastic, SOD-123F • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Indicated by cathode band • Weight : Approximated 0.018 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%.

Parameter	Symbol	BFGP4001W-F	BFGP4002W-F	BFGP4003W-F	BFGP4004W-F	BFGP4005W-F	BFGP4006W-F	BFGP4007W-F	UNIT
Making code		F1	F2	F3	F4	F5	F6	F7	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	
Maximum Instantaneous Forward Voltage @1.0A, $T_A = 25^\circ\text{C}$	V_F	1.3							V
Reverse recovery time $I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{RR} = 0.25\text{A}$	trr	150				250	500		ns
Operating Temperature	T_J	-55 ~ +150							°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	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			1.0	uA
	$V_R = V_{RRM}, T_A = 125^\circ\text{C}$				300	
Thermal resistance	Junction to ambient	R_{BJA}		42		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		15		pF
Storage temperature		T_{STG}	-55		+150	°C

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Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

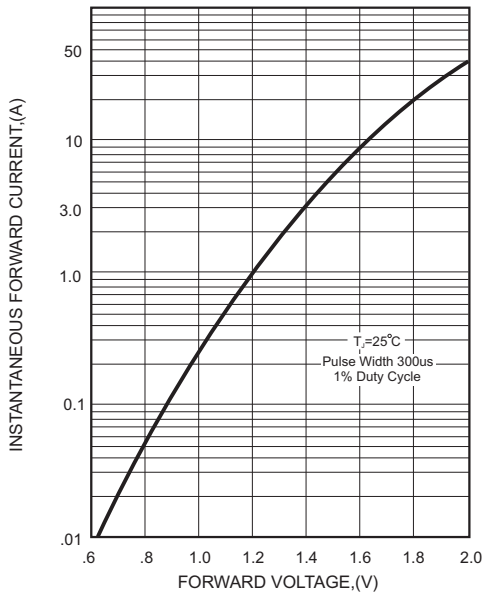


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

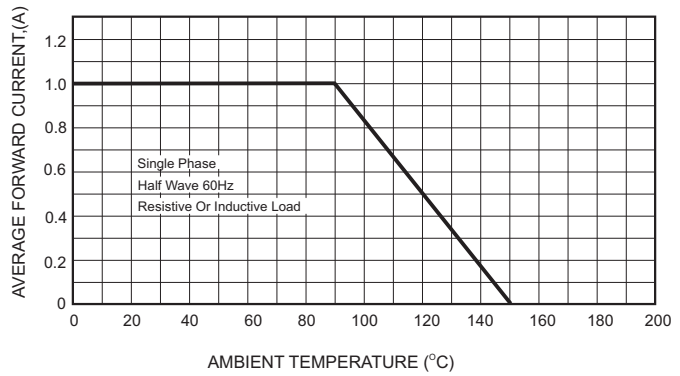


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

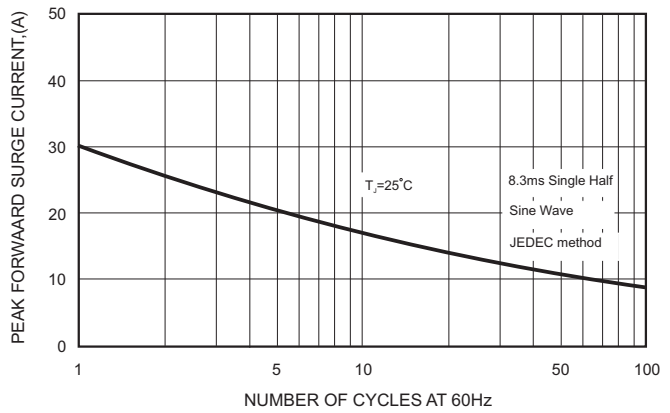
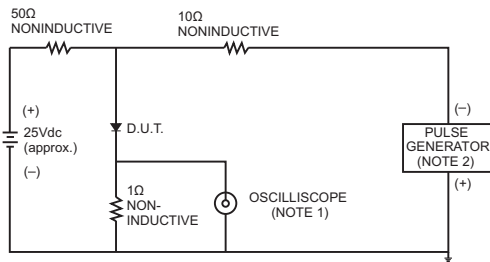


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

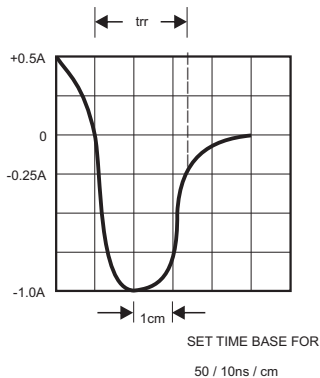


FIG.5-TYPICAL JUNCTION CAPACITANCE

