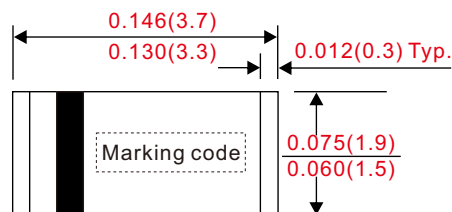


■ Features

- Low profile surface mounted application in order to optimize board space.
- High current capability.
- High surge capability.
- Glass passivated chip junction inside.
- Suffix "G" indicates Halogen-free part, ex. BGP154W1G-F.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

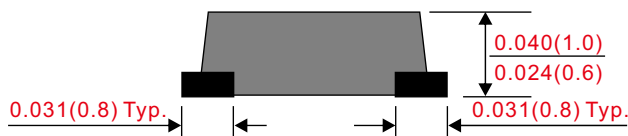
■ Outline

SOD-123H



■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123H
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : Approximated 0.011 gram



Dimensions in inches and (millimeters)

■ 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	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_O			1.5	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			50	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			5.0	uA
	$V_R = V_{RRM} \quad T_A = 125^\circ\text{C}$				100	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		200		°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		10		pF
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 @ 1.5A, $T_A = 25^\circ\text{C}$ V_F (V)	Operating Junction temperature T_J (°C)
BGP154W1-F	A24	400	280	400	1.10	-55 ~ +150
BGP155W1-F	A25	600	420	600		
BGP156W1-F	A26	800	560	800		
BGP157W1-F	A27	1000	700	1000		

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

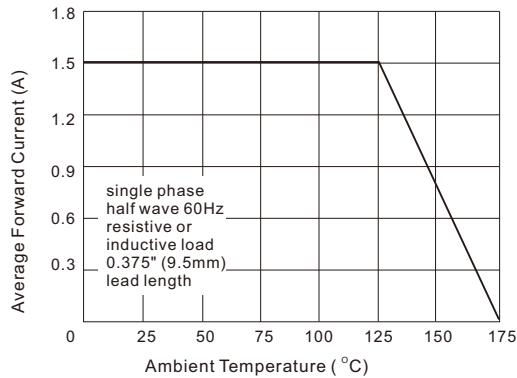


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

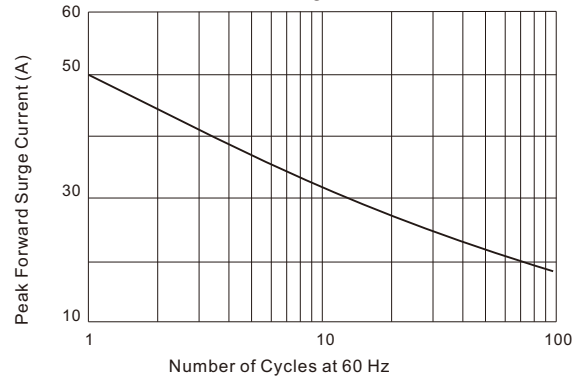


Fig. 3 - Typical Instantaneous Forward Characteristics

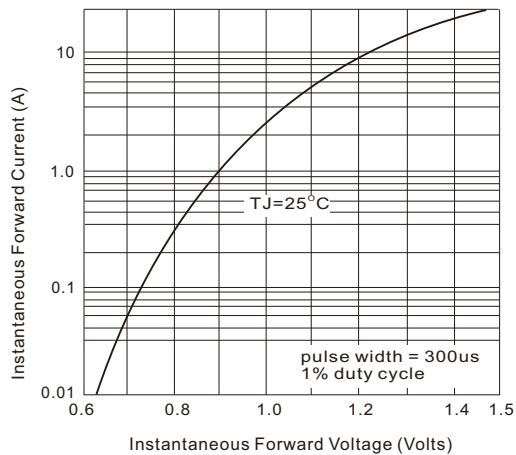


Fig. 4 - Typical Reverse Characteristics

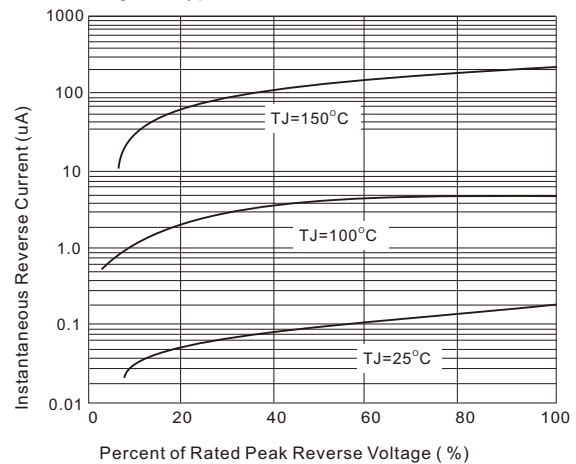
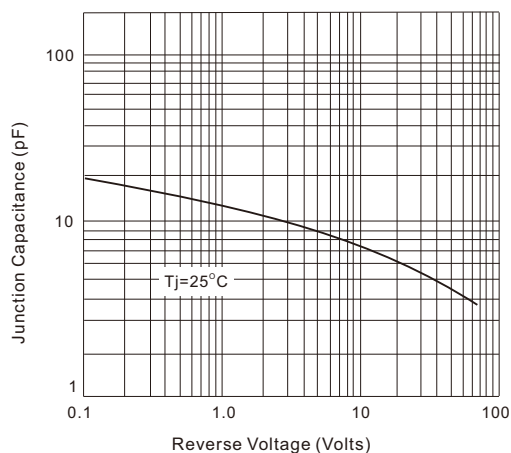
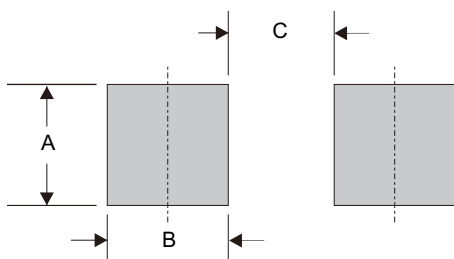


Fig. 5 - Typical Junction Capacitance



■ SOD-123H foot print



A	B	C
0.071 (1.80)	0.051 (1.30)	0.067 (1.70)

Dimensions in inches and (millimeters)

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