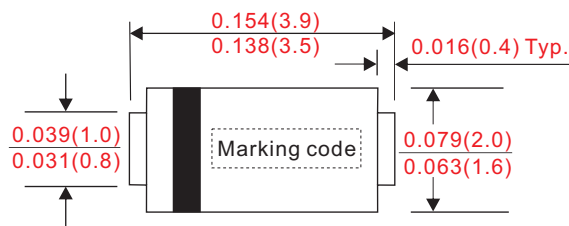


■ Features

- Low profile surface mounted application in order to optimize board space.
- High current capability.
- High surge capability.
- Ultrafast recovery time for high efficiency.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. BUGP4001WG-S.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Outline

SOD-123S



Dimensions in inches and (millimeters)

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123S
- 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		Conditions			Symbol	MIN.	TYP.	MAX.	UNIT		
Forward rectified current					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°C			I _R			5.0	uA		
		V _R = V _{RRM} T _A = 125°C						100			
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 @1A, T _A = 25°C V _F (V)	Max. reverse recovery time(1) T _{rr} (ns)		Operating temperature T _J (°C)			
BUGP4001W-S	H1	50	35	50	1.0	50		-55 ~ +150			
BUGP4002W-S	H2	100	70	100							
BUGP4003W-S	H3	200	140	200							
BUGP4004W-S	H4	400	280	400	1.40	75					
BUGP4005W-S	H5	600	420	600							
BUGP4006W-S	H6	800	560	800							
BUGP4007W-S	H7	1000	700	1000							

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

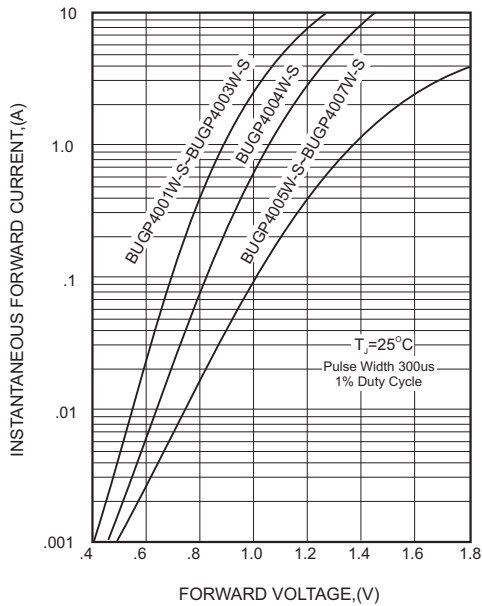


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

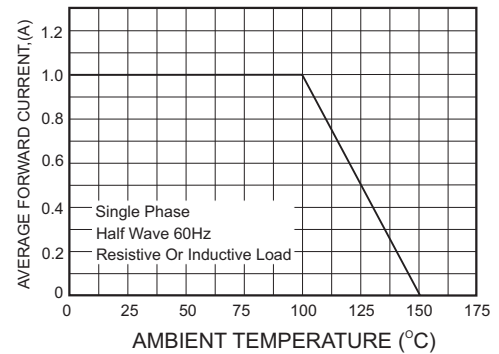


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

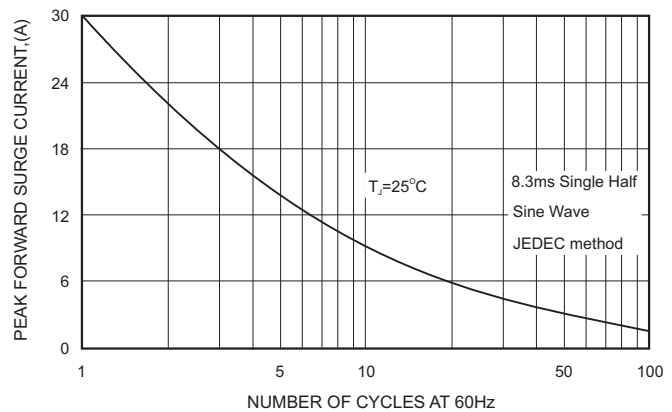
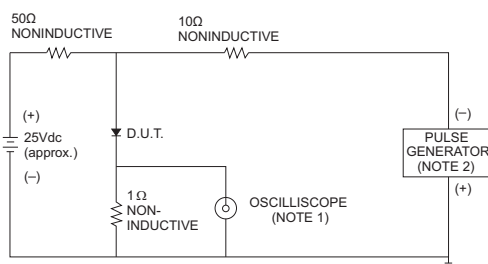


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

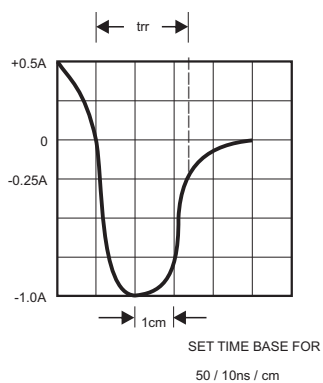
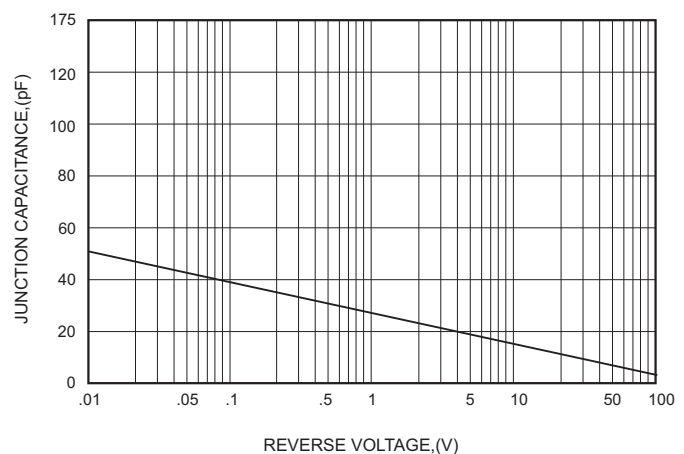
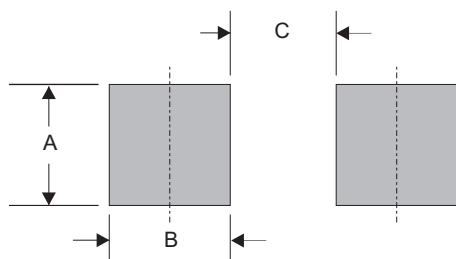


FIG.5-TYPICAL JUNCTION CAPACITANCE



■ SOD-123S foot print



A	B	C
0.044 (1.10)	0.039 (1.00)	0.079 (2.00)

Dimensions in inches and (millimeters)

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