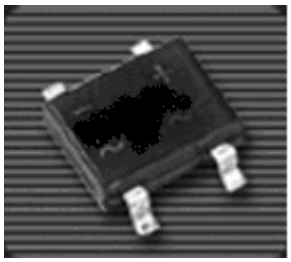
Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers

Reverse Voltage 50V to 1000V Forward Current 1.0 Ampere

DB101SG thru DB107SG

DBS



Equivalent Circuit

Features

- Ideal for printed circuit boards
- Applicable for automotive insertion
- High surge current capability
- High temperature soldering guaranteed: 260°C, 10 seconds, 0.375”(9.5mm) lead length at 5 lbs(2.3kg) tension.
- Pb-free lead plating and halogen-free package

Mechanical Data

- Case: Molded plastic body, epoxy meets UL 94V-0 flammability rating
- Terminals: Pure tin plated, solderable per J-STD-002B and JESD22-B102D
- Polarity : as marked on body

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	Type							Units
			DB101SG	DB102SG	DB103SG	DB104SG	DB105SG	DB106SG	DB107SG	
Repetitive 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	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg, I_F=1A		V_F	1.1							V
Maximum average forward output rectified current at T_A=40 °C		$I_{F(AV)}$	1 (Note 1)							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	50							A
Rating for fusing (t<8.3ms)		I^2t	10							A^2s
Maximum DC reverse current at rated DC blocking voltage per leg	T_A=25°C	I_R	10							μA
	T_A=125°C		500							
Typical thermal resistance per leg (Note 1)		$R_{\theta JA}$ $R_{\theta JL}$	40 15							°C /W
Typical diode junction capacitance per leg @f=1MHz and applied 4V reverse voltage		C_J	25							pF
Storage temperature range		Tstg	-55 ~ +150							°C
Operating temperature range		T_J	-55 ~ +150							°C

Note : 1.Units mounted on PCB with 0.47”x0.47”(12 mmx12mm) copper pads.

RATING AND CHARACTERISTIC CURVES
DB101SG THRU DB107SG

FIG.1-MAXIMUM NONO-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELELMENT

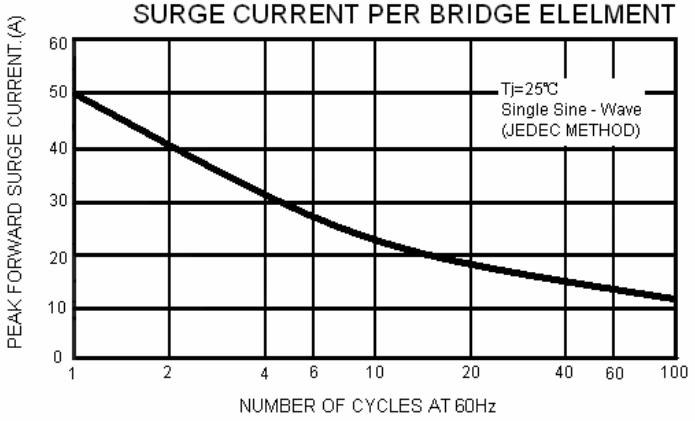


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

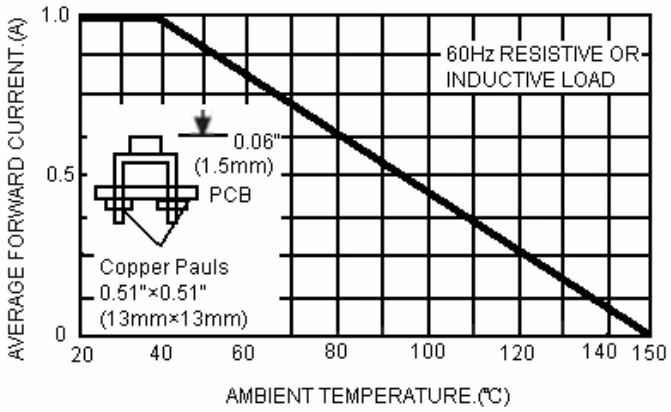


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

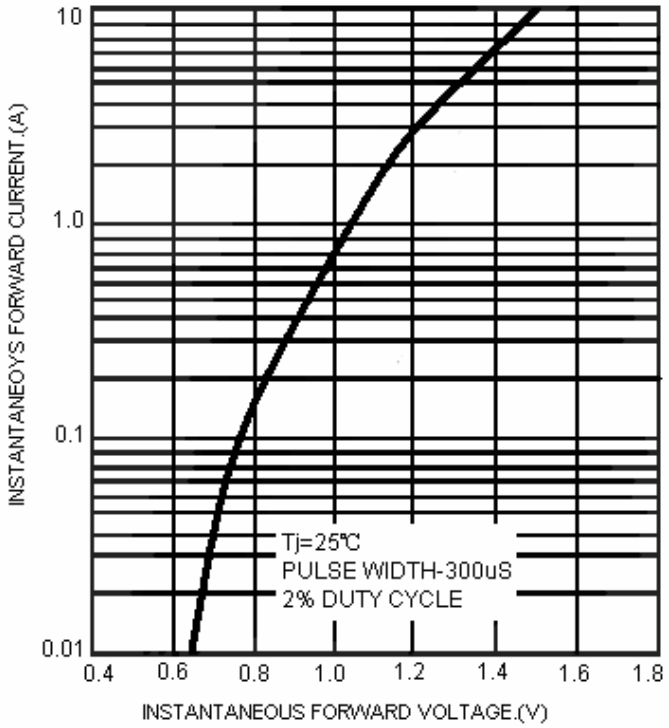
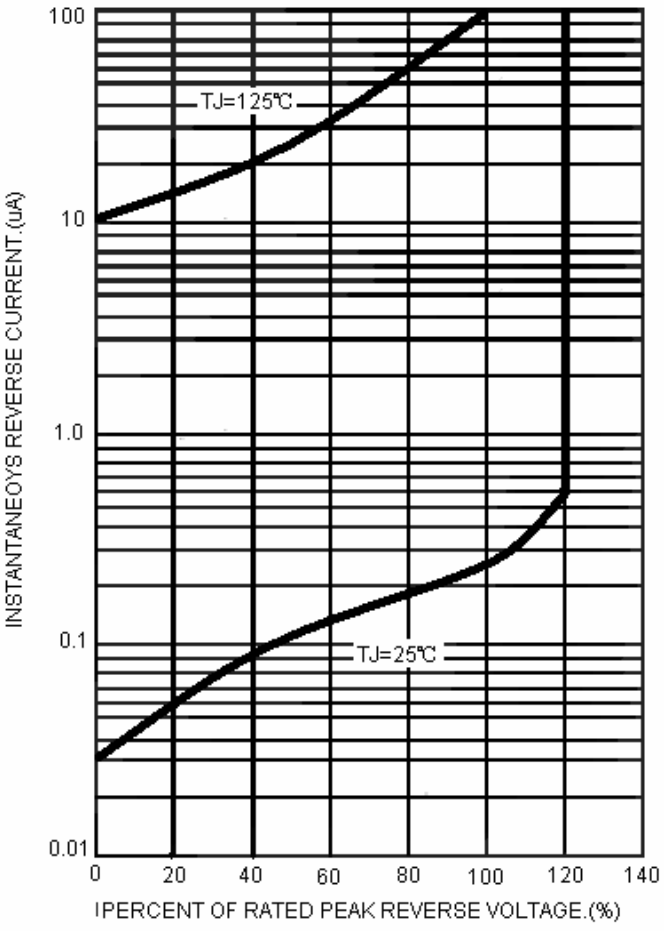
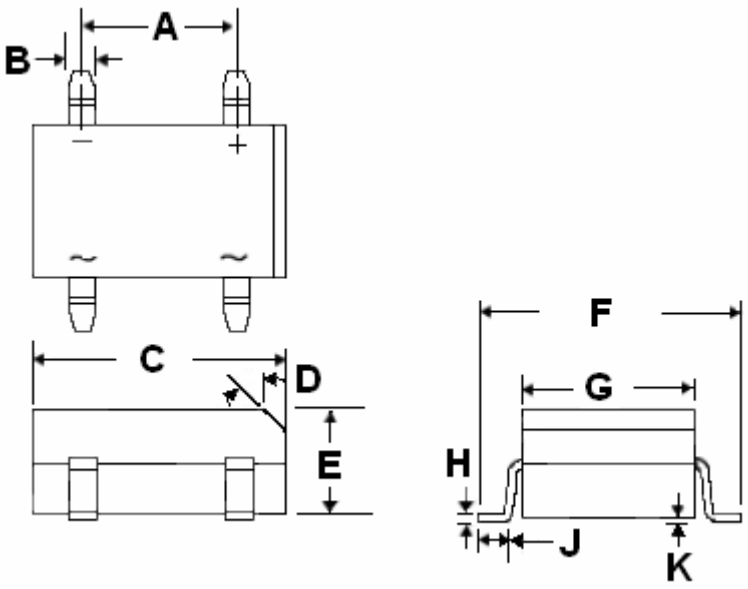


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



DBS Dimension



DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.195	0.205	5.000	5.200	F	0.386	0.404	9.800	10.300
B	0.040	0.047	1.020	1.200	G	0.245	0.255	6.200	6.500
C	0.320	0.335	8.130	8.510	H	0.009	0.013	0.220	0.330
D	45° (typ)		45° (typ)		J	0.040	0.060	1.020	1.530
E	0.120	0.130	3.050	3.300	K	0.003	0.013	0.076	0.330

Notes : 1.Controlling dimension : millimeters.
2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead :Pure tin plated.
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0.

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