

Glass Passivated Super Fast Rectifiers
R-1

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020
LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874


Primary characteristics

$I_{F(AV)}$	1A
V_{RRM}	50V to 1000V
I_{FSM}	30A
I_{RM}	5 μ A
V_{FM} at $I_F=1A$	0.95/1.3/1.7V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

Mechanical data

- R-1
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque: 10cm \cdot kg(8.8 inches \cdot lbs)max.
- Recommended Torque: 5.7 cm \cdot kg(5 inches \cdot lbs)

Maximum rating (Ta=25°C unless otherwise noted)

Parameter	Sym	R-1									Unit
		1S1G	1S2G	1S3G	1S4G	1S5G	1S6G	1S7G	1S8G	1S9G	
Max. repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	V
Max. RMS reverse voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	V
Max. DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	V
Max. average forward current	$I_{F(AV)}$	1									A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	I_{FSM}	30									A
Max. instantaneous forward voltage drop per diode	V_{FM}	0.95			1.3		1.7			V	
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	5									μ A
		100									
Operating junction temperature	T_J	-55 ~ +150									°C
Storage temperature	T_{STG}	-55 ~ +150									°C
Maximum reverse recovery time (Note1)	t_{rr}	35									nS

Notes:

1 Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$



Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
1S1G				

Typical characteristics

FIG.3- TYPICAL REVERSE CHARACTERISTICS

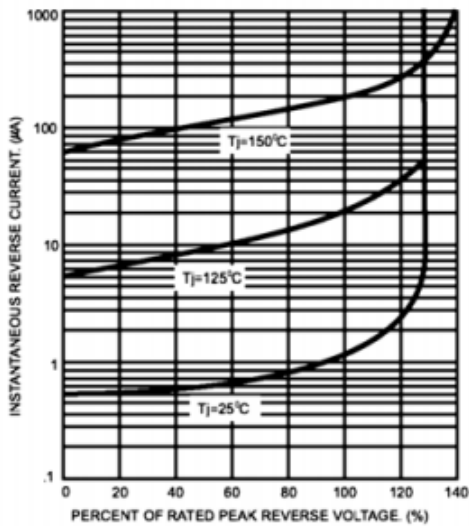


FIG.4- TYPICAL FORWARD CHARACTERISTICS

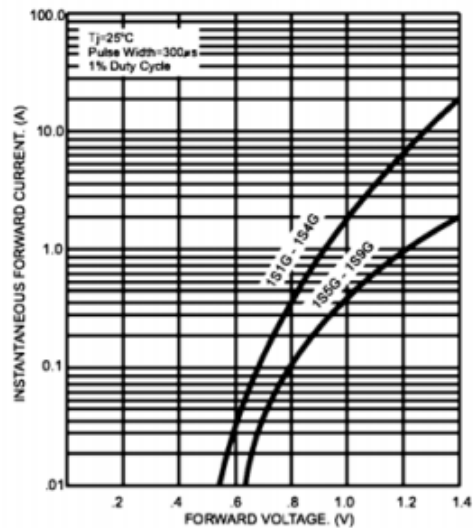


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

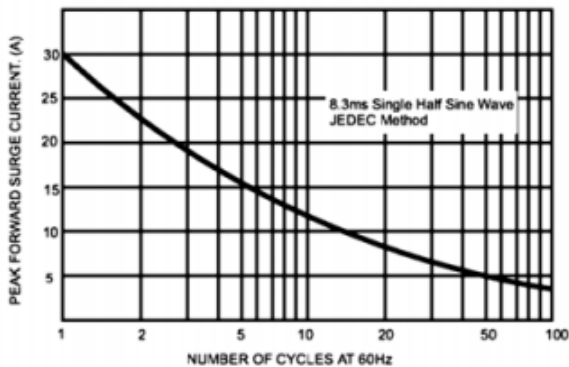
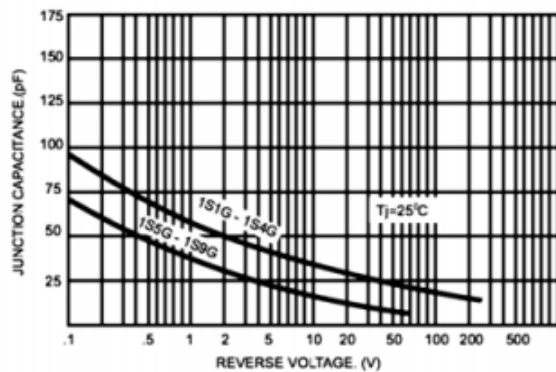
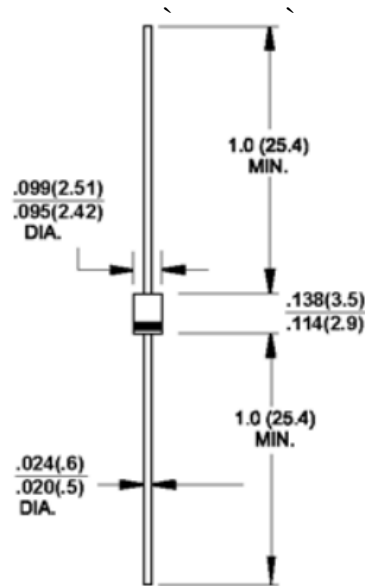


FIG.6- TYPICAL JUNCTION CAPACITANCE



Package outline dimensions



Dimensions in inches and (millimeters)

Golden SEMI Inc. - Legal Notice

Disclaimer – All data and specifications are subject to changes without notice

GOLDEN SEMI Inc, it's affiliates, agents, distributors and employees neither accept nor assume any responsibility for errors or inaccuracies. All data and specifications are intended for information and provide a product description only. Electrical and mechanical parameters listed in GOLDEN SEMI data sheets and specifications will vary dependent upon application and environmental conditions . GOLDEN SEMI is not liable for any damages occurred or resulting from any circuit, product or end-use application for which it's products are used. GOLDEN SEMI products are not intended or designed for use in life saving or sustaining apparatus and purchase of any GOLDEN SEMI products automatically indemnifies GOLDEN SEMI against any claims or damages resulting from application malfunction