

Surface Mount Glass Passivated Junction Rectifier

FEATURES

- Glass passivated standard rectifiers
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Meets environmental standard MIL-S-19500D
- Moisture sensitivity :level 1, per J-STD-020
- Solder dip 275 °C, 10 s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



DO-213AA

TYPICAL APPLICATIONS

For use in general purpose rectification of lighting, power supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecommunication.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1 A
V_{RRM}	50 V to 1000 V
I_{FSM}	25 A
V_F	1.1 V
I_R	5.0 μ A
T_J max.	150 °C

MECHANICAL DATA

Case: DO-213AA, molded epoxy body , Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22B-106

Polarity: One silver ring denotes cathode and the type numbers are noted on the label on the reel

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)									
PARAMETER	SYMBOL	GL1A	GL1B	GL1D	GL1G	GL1J	GL1K	GL1M	UNIT
Maximum 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 average forward rectified current at $T_T = 95\text{ °C}$	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	25							A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150							°C

ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GL1A	GL1B	GL1D	GL1G	GL1J	GL1K	GL1M	UNIT
Maximum instantaneous forward voltage	1 A	VF	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25	IR	5							μA
	TA=125		50							
Typical reverse recovery time	IF=0.5A,IR=1.0A, IRR=0.25A	t _{rr}	1.5							uS
Typical junction capacitance	4.0 V, 1 MHz	CJ	10							pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	GL1A	GL1B	GL1D	GL1G	GL1J	GL1K	GL1M	UNIT
Maximum thermal resistance ⁽¹⁾⁽²⁾	R _{θJA}	75							/W
	R _{θJT}	40							

Notes: (1) Thermal resistance from junction to ambient, 0.24 × 0.24" (6.0 × 6.0mm) copper pads to each terminal

(2) Thermal resistance from junction to terminal, 0.24 × 0.24" (6.0 × 6.0mm) copper pads to each terminal

ORDERING INFORMATION (Example)			
PREFERRED P/N	UNIT WEIGHT (g)	BASE QUANTITY	DELIVERY MODE
GL1M-HM32	0.033	2500	7" diameter plastic tape and reel
GL1M-HK32	0.033	9000	13" diameter plastic tape and reel

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

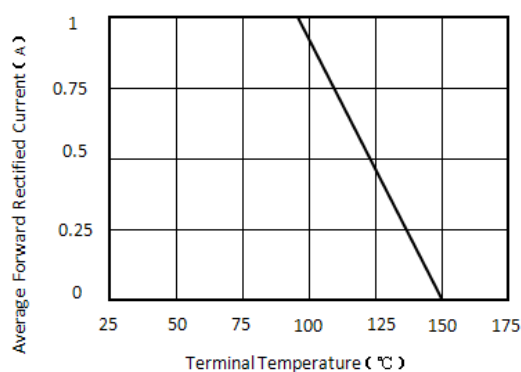


Figure 1. Forward Current Derating Curve

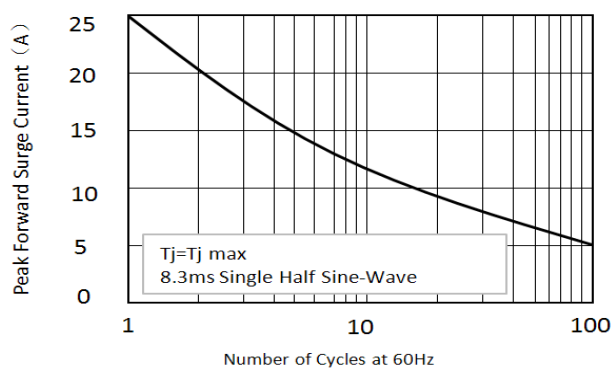


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

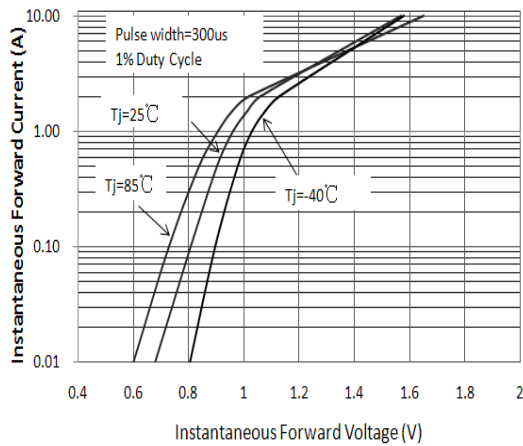


Figure 3. Typical Instantaneous Forward Characteristics

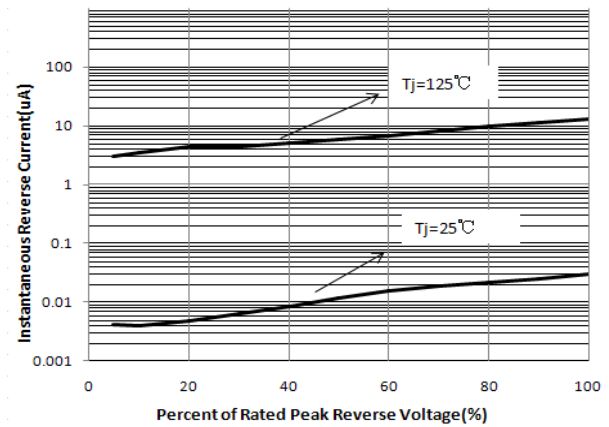


Figure 4. Typical Reverse Characteristics

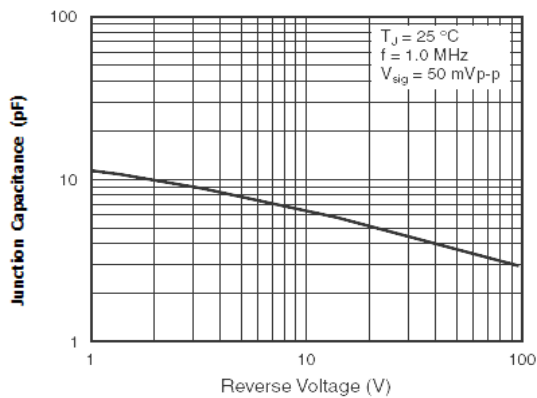


Figure 5. Typical Junction Capacitance

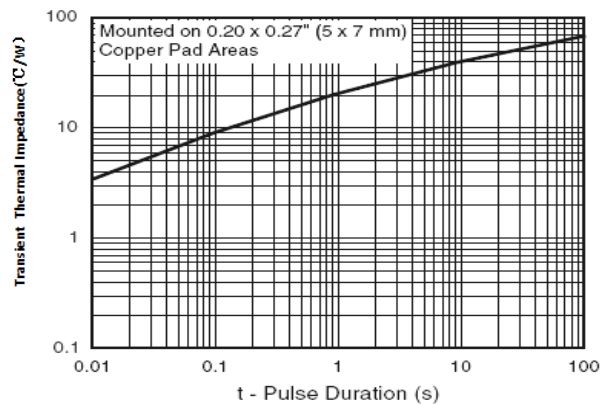


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-213AA

