Silicon Diode

GL34J

600V / 0,5A

DATASHEET

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Source: General Semiconductor Databook 1998

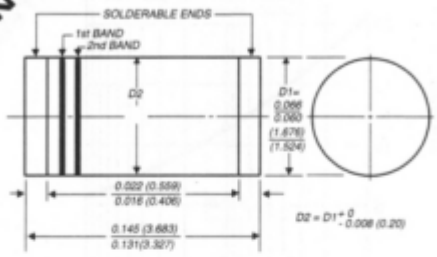
GL34A THRU GL34J

SURFACE MOUNT GLASS PASSIVATED FAST SWITCHING JUNCTION RECTIFIER

***Reverse Voltage** - 50 to 600 Volts* ***Forward Current** - 0.5 Ampere*

PATENTED*

DO-213AA



1st band denotes type and polarity
2ond band denotes voltage type

Dimensions in inches and (millimeters)

* *Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-end cap assembly by Patent No. 3,930,306*

SUPERECTIFIER®

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mount applications
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- High temperature soldering guaranteed: 450°C/5 seconds at terminals. Complete device submersible temperature of 260°C for 10 seconds in solder bath

MECHANICAL DATA

Case: JEDEC DO-213AA molded plastic over glass body
Terminals: Plated terminals, solderable per MIL-STD-750, Method 2026
Polarity: Two bands indicate cathode-end - 1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating
Mounting Position: Any
Weight: 0.0014 ounce, 0.036 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Standard recovery device: first band is white	*SYMBOLS*	*GL34A*	*GL34B*	*GL34D*	*GL34G*	*GL34J*	
Polarity color bands (2nd Band)		Gray	Red	Orange	Yellow	Green	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	Volts
Maximum average forward rectified current at T_T=75°C	$I_{(AV)}$	0.5					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	10.0					Amps
Maximum instantaneous forward voltage at 0.5A	V_F	1.2				1.3	Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25°C / T_A=125°C	I_R	5.0 50.0					µA
Maximum full load reverse current, full cycle average at T_A=55°C	$I_{R(AV)}$	30.0					µA
Typical reverse recovery time (NOTE 1)	t_{rr}	1.5					µs
Typical junction capacitance (NOTE 2)	C_J	4.0					pF
Maximum thermal resistance (NOTE 3) (NOTE 4)	$R_{\theta JA}$ $R_{\theta JT}$	150.0 70.0					°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					°C

NOTES:
(1) Reverse recovery test conditions I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient, 0.2 x 0.2" (5.0 x 5.0mm) copper pads to each terminal
(4) Thermal resistance from junction to terminal, 0.2 x 0.2" (5.0 x 5.0mm) copper pads to each terminal

RATINGS AND CHARACTERISTIC CURVES GL34A THRU GL34J

FIG. 1 - FORWARD CURRENT DERATING CURVE

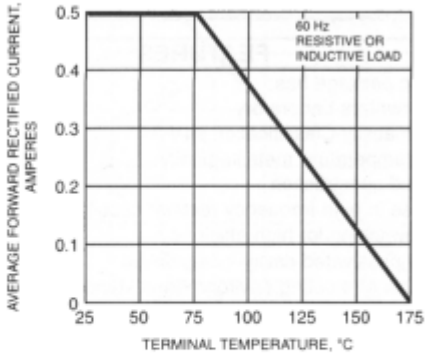


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

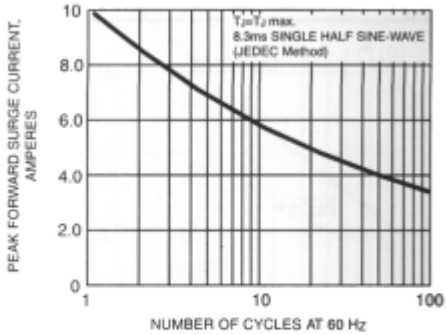


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

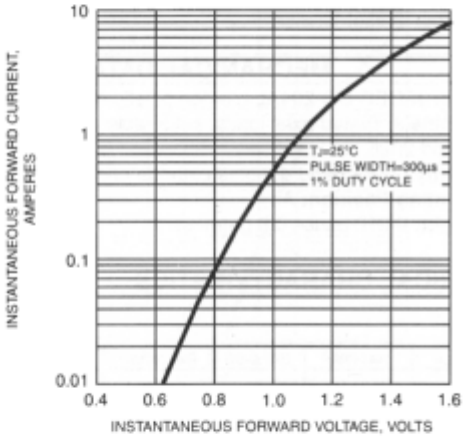


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

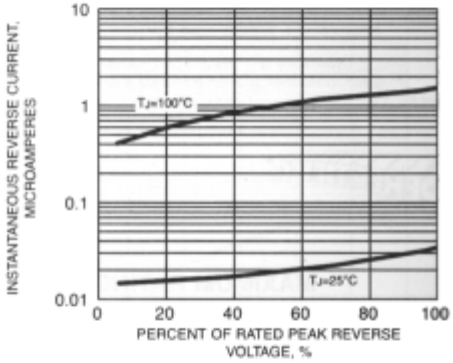
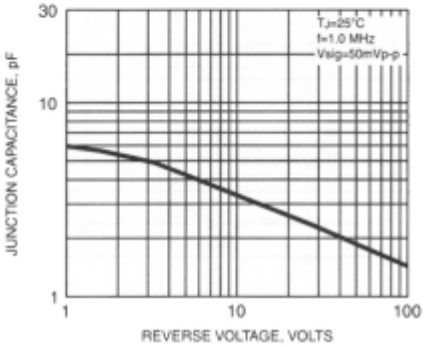



FIG. 5 - TYPICAL JUNCTION CAPACITANCE