

Vishay General Semiconductor

Surface-Mount Glass Passivated Junction Fast Switching Rectifier

Superectifier®

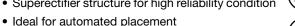


GL34 (DO-213AA)

PRIMARY CHARACTERISTICS						
I _{F(AV)}	0.5 A					
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V					
I _{FSM}	10 A					
t _{rr}	150 ns, 250 ns					
V_{F}	1.3 V					
T_J max.	175 °C					
Package	GL34 (DO-213AA)					
Circuit configurations	Single					

FEATURES





· Fast switching for high efficiency

• Meets MSL level 1, per J-STD-020, LF maximum RoHS peak of 260 °C

• Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer, automotive, and telecommunication.

MECHANICAL DATA

Case: GL34 (DO-213AA), molded epoxy over glass body Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS- compliant, commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: two bands indicate cathode end - 1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	RGL34A	RGL34B	RGL34D	RGL34G	RGL34J	RGL34K	UNIT
FAST SWITCHING DEVICE: 1st BAND IS RED	STWIDOL							
Polarity color bands (2 nd band)		Gray	Red	Orange	Yellow	Green	Blue	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current at $T_T = 55^{\circ}\text{C}$	I _{F(AV)}	0.5						Α
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	10						Α
Maximum full load reverse current, full cycle average $T_A = 55$ °C	I _{R(AV)}	30					μА	
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175					°C	



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS		SYMBOL	RGL34A	RGL34B	RGL34D	RGL34G	RGL34J	RGL34K	UNIT
Maximum instantaneous forward voltage	0.5 A V _F			1.3					V	
Maximum DC reverse current at rated DC	.A 20 0			5.0					- μA	
blocking voltage		T _A = 125 °C	- I _R	50					μΛ	
Maximum reverse recovery time	$I_F = 0.5$ $I_{rr} = 0.2$	A, I _R = 1.0 A, 5 A	t _{rr}	150 250				50	ns	
Typical junction capacitance	4.0 V, 1	.0 V, 1 MHz C _J			4				pF	

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	RGL34A RGL34B RGL34D RGL34G RGL34J RGL34K					RGL34K	UNIT
Maximum thermal resistance	R _{0JA} (1)	150						°C/W
Waxiinum memaresistance	R _{0JT} (2)	70						C/VV

Notes

- $^{(1)}$ Thermal resistance from junction to ambient, 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pads to each terminal
- (2) Thermal resistance from junction to terminal, 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pads to each terminal

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
RGL34J-E3/98	0.036	98	2500	7" diameter plastic tape and reel				
RGL34J-E3/83	0.036	83	9000	13" diameter plastic tape and reel				

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RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

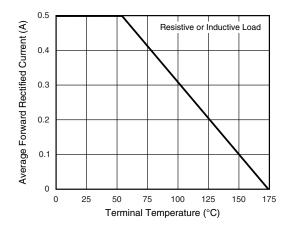


Fig. 1 - Forward Current Derating Curve

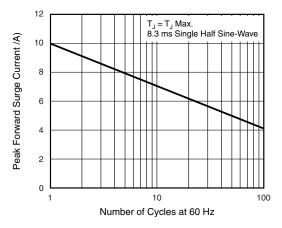


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

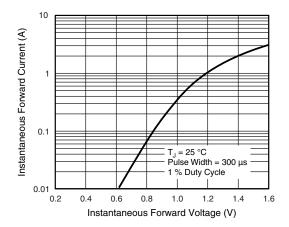


Fig. 3 - Typical Instantaneous Forward Characteristics

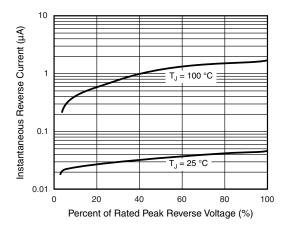


Fig. 4 - Typical Reverse Characteristics

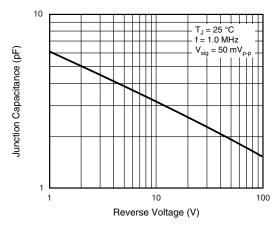


Fig. 5 - Typical Junction Capacitance

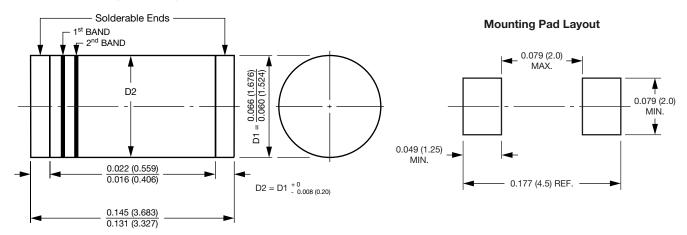


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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

GL34 (DO-213AA)



¹st band denotes type and polarity

^{2&}lt;sup>nd</sup> band denotes voltage type



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