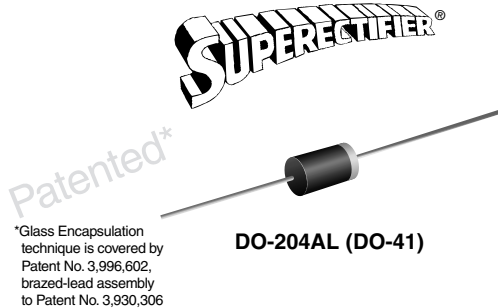


## High Voltage Glass Passivated Junction Rectifier



### FEATURES

- Superrectifier structure for high reliability application
- Cavity-free glass-passivated junction
- Low leakage current
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For use in rectification of high voltage power supplies, inverters, converters and freewheeling diodes application.

### MECHANICAL DATA

**Case:** DO-204AL, molded epoxy over glass body

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

**Polarity:** Color band denotes cathode end

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	0.25 A
$V_{RRM}$	1000 V to 4000 V
$I_{FSM}$	15 A
$I_R$	5.0 $\mu$ A
$V_F$	3.5 V
$T_J$ max.	175 °C

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)						
PARAMETER	SYMBOL	GI250-1	GI250-2	GI250-3	GI250-4	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	2000	3000	4000	V
Maximum RMS voltage	$V_{RMS}$	700	1400	2100	2800	V
Maximum DC blocking voltage	$V_{DC}$	1000	2000	3000	4000	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 75$ °C	$I_{F(AV)}$	0.25				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	15				A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 65 to + 175				°C



ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	TEST CONDITIONS		SYMBOL	GI250-1	GI250-2	GI250-3	GI250-4	UNIT
Maximum instantaneous forward voltage	0.25 A		V <sub>F</sub>			3.5		V
Maximum DC reverse current at rated DC blocking voltage		T <sub>A</sub> = 25 °C T <sub>A</sub> = 100 °C	I <sub>R</sub>			5.0 50		μA
Typical reverse recovery time	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>tr</sub> = 0.25 A		t <sub>rr</sub>			2.0		μs
Typical junction capacitance	4.0 V, 1 MHz		C <sub>J</sub>			3.0		pF

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	GI250-1	GI250-2	GI250-3	GI250-4	UNIT	
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>			130			°C/W

**Note:**

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GI250-4E3/54	0.339	54	5500	13" diameter paper tape and reel
GI250-4E3/73	0.339	73	3000	Ammo pack packaging
GI250-4HE3/54 <sup>(1)</sup>	0.339	54	5500	13" diameter paper tape and reel
GI250-4HE3/73 <sup>(1)</sup>	0.339	73	3000	Ammo pack packaging

**Note:**

(1) Automotive grade AEC Q101 qualified

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub> = 25 °C unless otherwise noted)

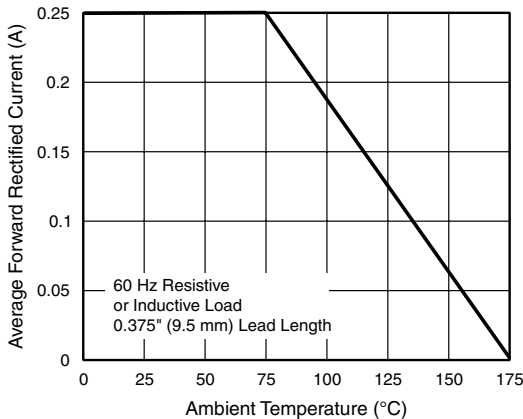


Figure 1. Forward Current Derating Curve

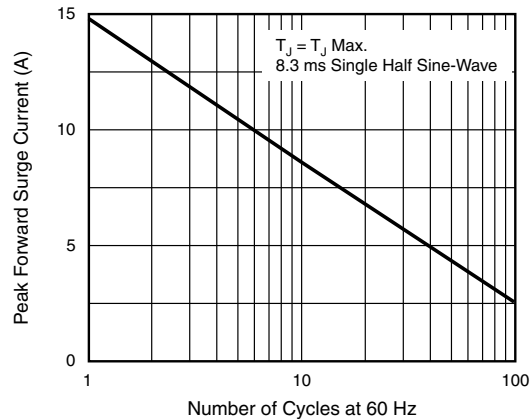


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

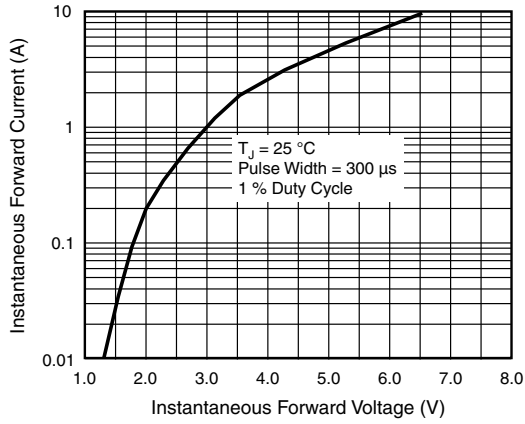


Figure 3. Typical Instantaneous Forward Characteristics

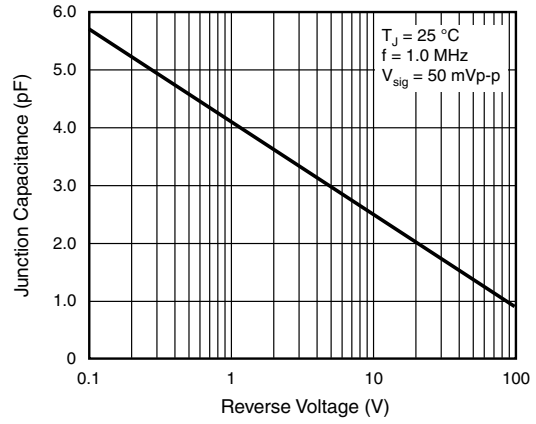


Figure 5. Typical Junction Capacitance

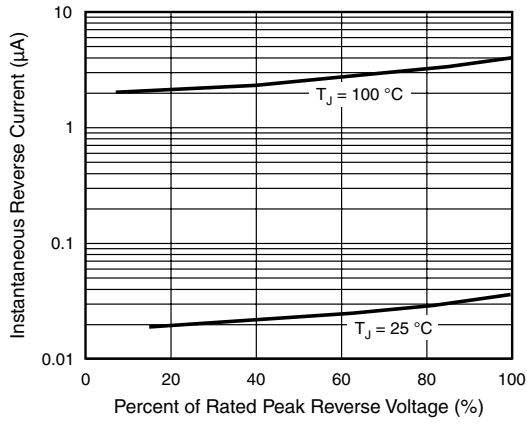
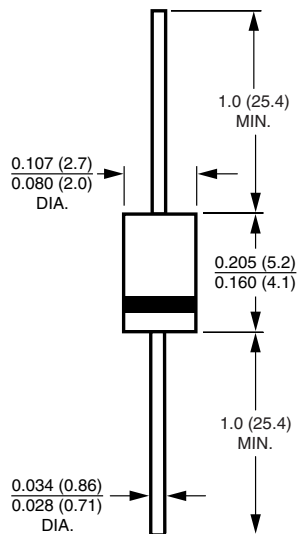


Figure 4. Typical Reverse Characteristics

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**DO-204AL (DO-41)**





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