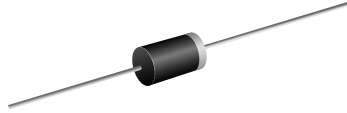


## Glass Passivated Junction Rectifier


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

### FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical  $I_R$  less than 0.1  $\mu\text{A}$
- 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

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.0 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	30 A
$I_R$	5.0 $\mu\text{A}$
$V_F$	1.1 V
$T_J$ max.	150 °C

### TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

### MECHANICAL DATA

**Case:** DO-204AL, molded epoxy over passivated chip  
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

**Polarity:** Color band denotes cathode end

### MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	GPP10A	GPP10B	GPP10D	GPP10G	GPP10J	GPP10K	GPP10M	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 0.375" (9.5 mm) lead length at $T_A = 75\text{ °C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length $T_A = 75\text{ °C}$	$I_{R(AV)}$	30							$\mu\text{A}$
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150							°C



ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)											
PARAMETER	TEST CONDITIONS		SYMBOL	GPP10A	GPP10B	GPP10D	GPP10G	GPP10J	GPP10K	GPP10M	UNIT
Maximum instantaneous forward voltage	1.0 A		$V_F$				1.1				V
Maximum DC reverse current at rated DC blocking voltage		$T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$	$I_R$				5.0 50				$\mu\text{A}$
Maximum junction capacitance	4.0 V, 1 MHz		$C_J$				6				pF

THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	GPP10A	GPP10B	GPP10D	GPP10G	GPP10J	GPP10K	GPP10M	UNIT	
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$				50 25				$^\circ\text{C/W}$	

**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
GPP10J-E3/54	0.34	54	5500	13" diameter paper tape and reel
GPP10J-E3/73	0.34	73	3000	Ammo pack packaging

## RATINGS AND CHARACTERISTICS CURVES

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

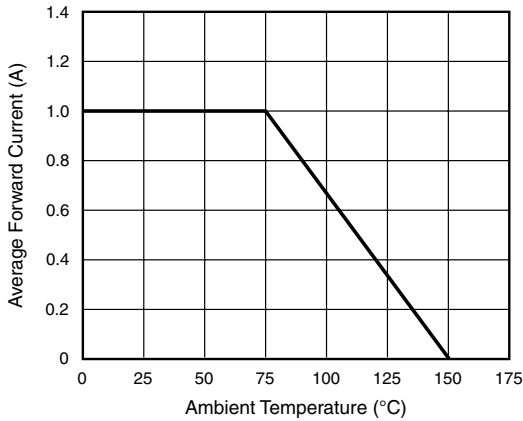


Figure 1. Forward Current Derating Curve

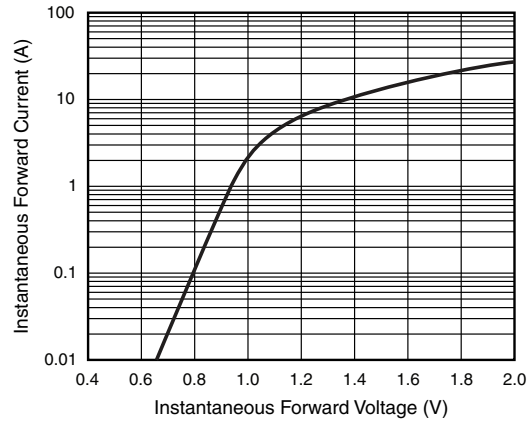


Figure 2. Typical Instantaneous Forward Characteristics Per Diode

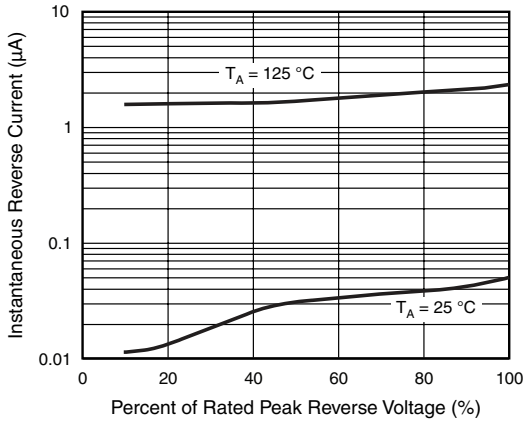


Figure 3. Typical Reverse Characteristics

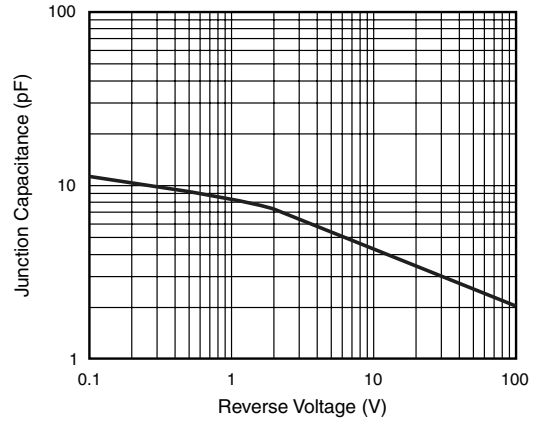
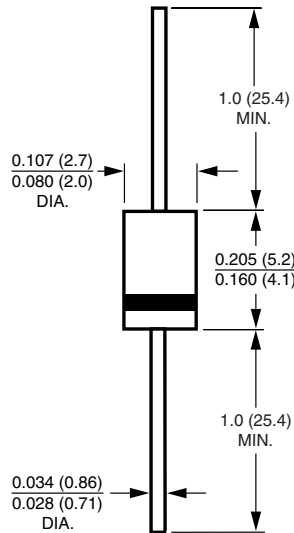


Figure 4. Typical Junction Capacitance

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### DO-204AL (DO-41)





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