



Glass Passivated Junction Plastic Rectifier



DO-204AL (DO-41)

FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical I_R less than 0.1 μA
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

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
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: Color band denotes cathode end

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.0 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	30 A
I_R	5.0 μA
V_F at $I_F = 1.0 A$	1.1 V
T_J max.	150 °C
Package	DO-204AL (DO-41)
Diode variations	Single die

MAXIMUM RATINGS ($T_A = 25\text{ }^\circ C$ 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 $T_A = 75\text{ }^\circ C$	$I_{F(AV)}$	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 $T_A = 75\text{ }^\circ C$	$I_{R(AV)}$	30							μA
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150							$^\circ C$



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	$T_A = 25\text{ }^\circ\text{C}$	I_R				5.0				μA
	$T_A = 100\text{ }^\circ\text{C}$					50				
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	$R_{\theta JA}^{(1)}$				50				$^\circ\text{C/W}$	
	$R_{\theta JL}^{(1)}$				25					

Note

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, PCB 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)

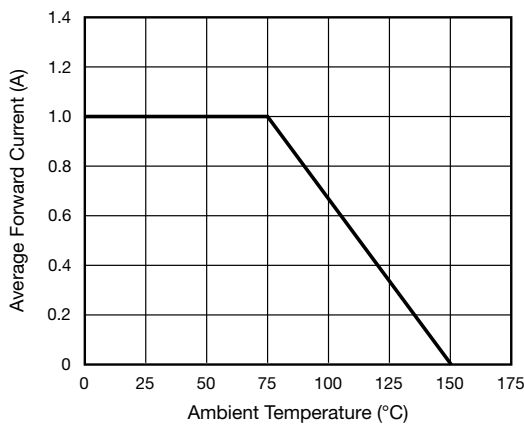


Fig. 1 - Forward Current Derating Curve

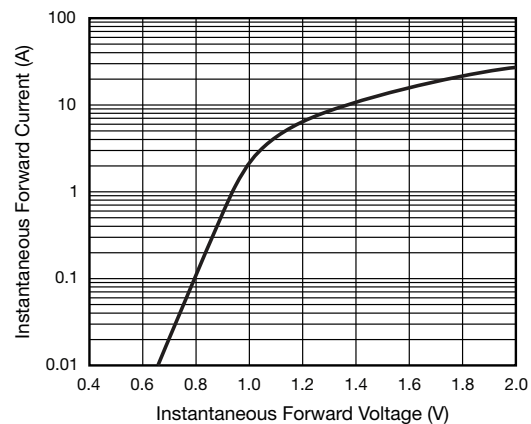


Fig. 2 - Typical Instantaneous Forward Characteristics Per Diode

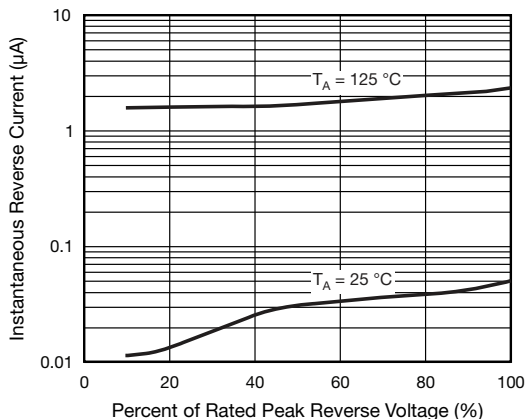


Fig. 3 - Typical Reverse Characteristics

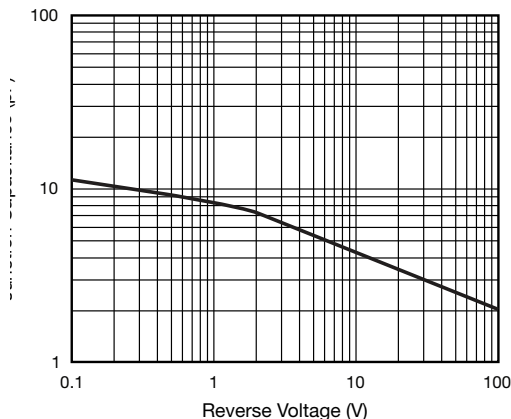
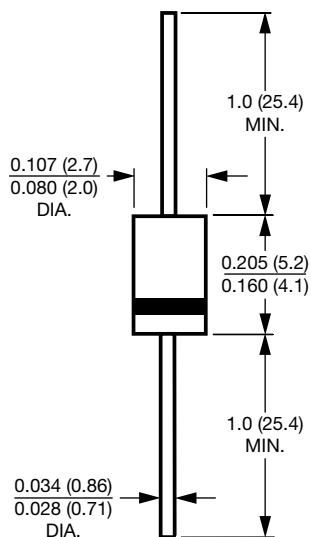


Fig. 4 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-204AL (DO-41)





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