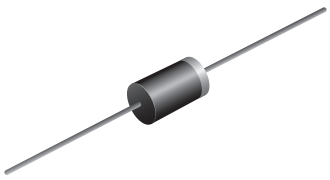
GP30A, GP30B, GP30D, GP30G, GP30J, GP30K, GP30M

Glass Passivated Junction Plastic Rectifier

SUPERECTIFIER®



DO-201AD

FEATURES

- Superectifier structure for high reliability condition
- Cavity-free glass-passivated junction
- Low leakage current, typical I_R less than 0.1 µA
- Low forward voltage drop
- High forward surge capability
- 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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	125 A
I_R	5.0 µA
V_F	1.2 V, 1.1 V
T_J max.	175 °C
Package	DO-201AD
Circuit configuration	Single

TYPICAL APPLICATIONS

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

MECHANICAL DATA

Case: DO-201AD, 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: color band denotes cathode end

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	GP30A	GP30B	GP30D	GP30G	GP30J	GP30K	GP30M	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 = 55 °C	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	125							A
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at T_A = 55 °C	$I_{R(AV)}$	100							µA
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**	**GP30A**	**GP30B**	**GP30D**	**GP30G**	**GP30J**	**GP30K**	**GP30M**	**UNIT**
Maximum instantaneous forward voltage	3.0 A		V_F	1.2		1.1					V
Maximum reverse current at rated DC blocking voltage		T_A = 25 °C	I_R	5.0							µA
		T_A = 125 °C		100							
Maximum reverse recovery time	I_F = 0.5 A, I_R = 1.0 V, I_{rr} = 0.25 A		t_{rr}	5.0							µs
Typical junction capacitance	4.0 V, 1 MHz		C_J	40							pF

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)									
PARAMETER	**SYMBOL**	**GP30A**	**GP30B**	**GP30D**	**GP30G**	**GP30J**	**GP30K**	**GP30M**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ (1)	20							°C/W
	$R_{\theta JL}$ (1)	10							

Note

(1) Thermal resistance from junction to ambient and from junction to lead 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**
GP30J-E3/54	1.28	54	1400	13" diameter paper tape and reel
GP30J-E3/73	1.28	73	1000	Ammo pack packaging

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

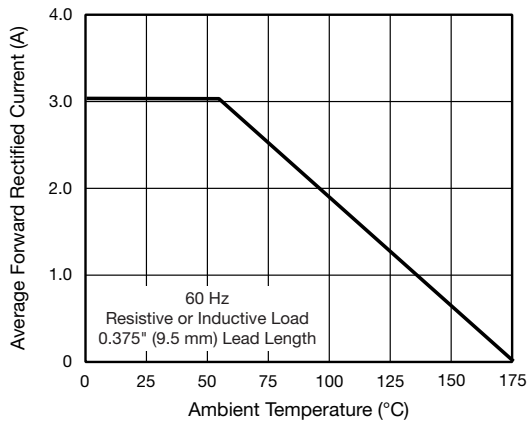


Fig. 1 - Forward Current Derating Curve

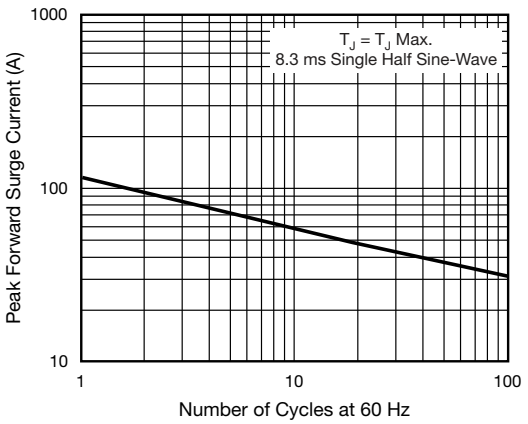


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

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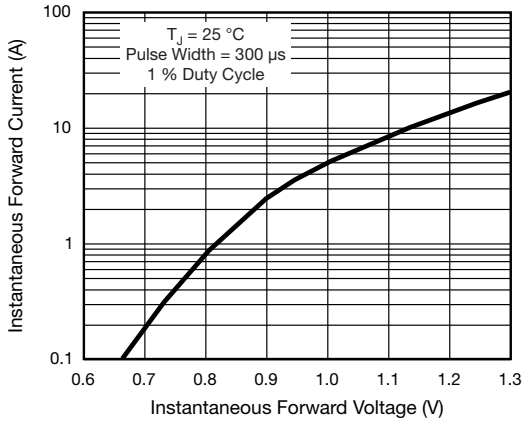


Fig. 3 - Typical Instantaneous Forward Characteristics

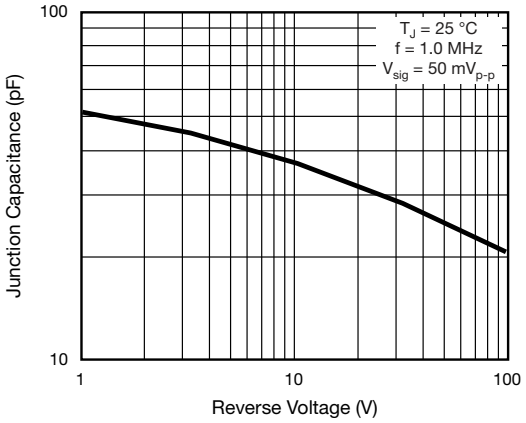


Fig. 5 - Typical Junction Capacitance

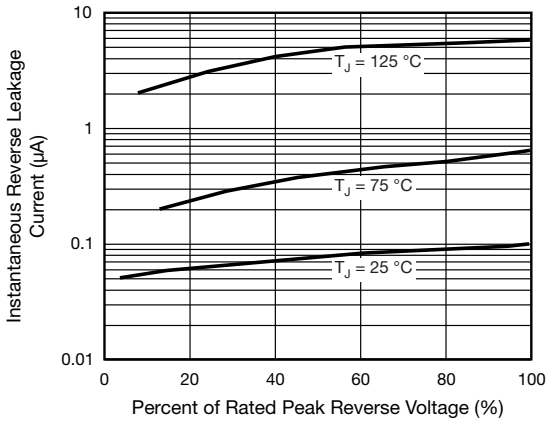
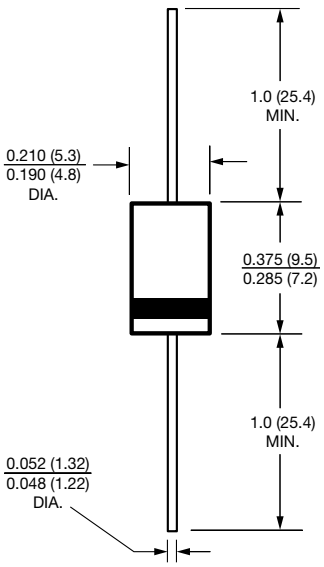


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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