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## RGP30B thru RGP30M Fast Switching Plastic Rectifier DO201AD Type Package

**Description:**

The RGP30 Series rectifiers are glass passivated junction, fast switching plastic rectifiers used for fast switching rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication applications.

**Features:**

- Superrectifier Structure for High Reliability Condition
- Fast Switching for High Efficiency
- Low Leakage Current, Typical  $I_R$  less than  $0.2\mu A$
- High Forward Surge Capability

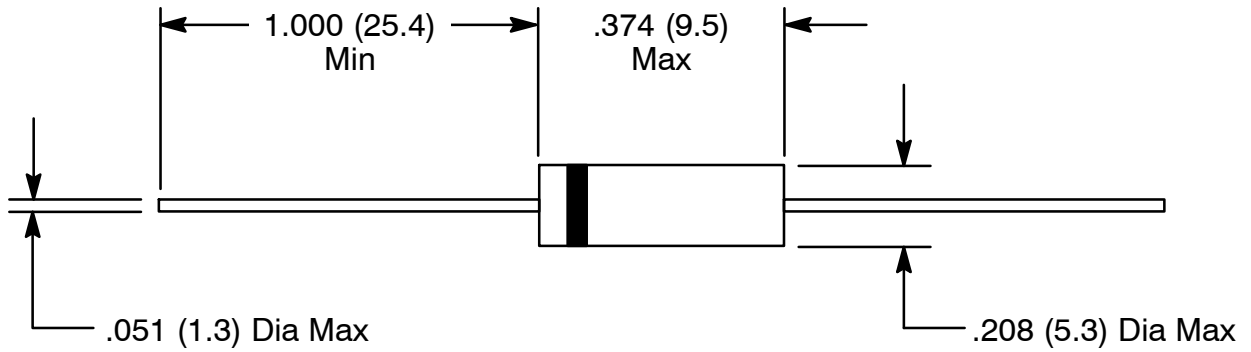
**Absolute Maximum Ratings:** ( $T_A = +25^\circ C$ , unless otherwise specified)

Max. Repetitive Reverse Voltage, $V_{RRM}$	
RGP30B .....	100V
RGP30D .....	200V
RGP30G .....	400V
RGP30J .....	600V
RGP30M .....	1000V
Max. RMS Voltage, $V_{RMS}$	
RGP30B .....	70V
RGP30D .....	140V
RGP30G .....	280V
RGP30J .....	420V
RGP30M .....	700V
Max. DC Blocking Voltage, $V_{DC}$	
RGP30B .....	100V
RGP30D .....	200V
RGP30G .....	400V
RGP30J .....	600V
RGP30M .....	1000V
Average Rectified Forward Current ( $T_A = +55^\circ C$ , .375" (9.5mm) Lead Length), $I_{F(AV)}$	3A
Peak Forward Surge Current, $I_{FSM}$	
8.3ms single half sine wave superimposed on rated load .....	125A
Max. Full Load Reverse Current, $I_{R(AV)}$	
Full Cycle Average, $T_A = +55^\circ C$ , .375" (9.5mm) Lead Length .....	100 $\mu A$
Storage Temperature Range, $T_{stg}$ .....	-65° to +175°C
Typical Thermal Resistance, Junction-to-Ambient (Note 1), $R_{thJA}$ .....	20°C/W

Note 1. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted.

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ , unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Instantaneous Forward Voltage	$V_F$	$I_F = 3\text{A}$	-	-	1.3	V	
DC Reverse Leakage Current	$I_R$	At Rated DC Blocking Voltage	$T_A = +25^\circ\text{C}$	-	-	5	$\mu\text{A}$
			$T_A = +150^\circ\text{C}$	-	-	100	$\mu\text{A}$
Reverse Recovery Time RGP15B, RGP15D, RGP15G RGP15J RGP15M	$t_{rr}$	$I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , $I_{rr} = 250\text{mA}$	-	-	150	ns	
			-	-	250	ns	
			-	-	500	V	
Junction Capacitance	$C_J$	$V_R = 4\text{V}$ , $f = 1\text{MHz}$	-	60	-	pF	



Color Band Denotes Cathode