

### **GP15A thru GP15M**

Surface Mount Glass Passivated Rectifier Reverse Voltage 50-1000V Forward Current 1.5A

#### **Features**

- Plastic package has Underwrites laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.5Ampere operation at T<sub>A</sub>=55°C with no thermal runaway
- ◆ Typical I<sub>R</sub> less than 0.1uA
- High temperature soldering guaranteed: 350°C/10seconds,
   0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension



Package: DO-204AC(DO-15)

#### **Mechanical Data**

- Case: JEDEC DO-204AC, molded plastic over glass body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- ◆ Weight: 0.014 ounce, 0.395gram

#### **Maximum Ratings & Electrical Characteristics**

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

Parameter		Symbols	GP15A	GP15B	GP15D	GP15G	GP15J	GP15K	GP15M	Units
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		$V_{RMS}$	50	100	200	400	600	800	1000	V
Maximum DC Blocking Voltage		$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current										
0.375"(9.5mm) lead length at T <sub>A</sub> =55°C		I <sub>F(AV)</sub>	1.5							Α
Peak Forward Surge Current (8.3ms single half sine-			50.0							А
wave superimposed on rated load, JEDEC Method)		I <sub>FSM</sub>								
Maximum Full Load Reverse Current,										
full cycle average, 0.375"(9.5mm) lead length T <sub>A</sub> =55°C		I <sub>R(AV)</sub>	I <sub>R(AV)</sub> 100						uA	
Maximum Instantaneous Forward Voltage at 1.5A		V <sub>F</sub>	1.1							V
Maximum DC Reverse Current	@T <sub>A</sub> =25°C		5.0							uA
at rated DC Blocking Voltage	@T <sub>A</sub> =150°C	I <sub>R</sub>								
Typical Reverse Recovery Time										
at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A		$T_RR$				1.0				us
Typical Junction Capacitance at 4.0V, 1MHz		C <sub>J</sub>	15.0						pF	
Typical Thermal Resistance (Note 1)		R <sub>THJA</sub>	45.0							
		R <sub>THJL</sub>	20.0							°C/W
Operating Junction and Storage Temperature Range		$T_J, T_{STG}$	-55 to +150							°C

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



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### **Ratings and Characteristics Curves**

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

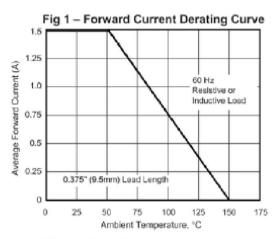


Fig 3 – Typical Instantaneous Forward Characteristics

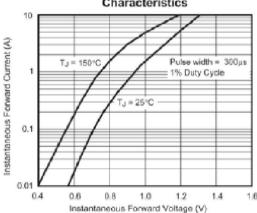


Fig 5 – Typical Junction Capacitance

T<sub>J</sub> = 25<sub>j</sub>C

f = 1.0 MHz

Vsig = 50mVp-p

1

1

10

Reverse Voltage (V)

Fig 2 – Maximum Non-repetitive Peak Forward Surge Current

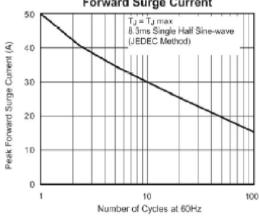


Fig 4 - Typical Reverse Characteristics

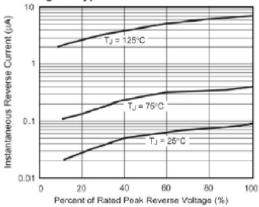
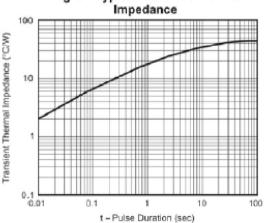


Fig. 6 – Typical Transient Thermal





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### **Package Outline Dimensions**

in inches (millimeters)

DO-204AC(DO-15)

