

# RGP02-12ES // 20ES

## FAST RECOVERY HIGH VOLTAGE RECTIFIER DIODES

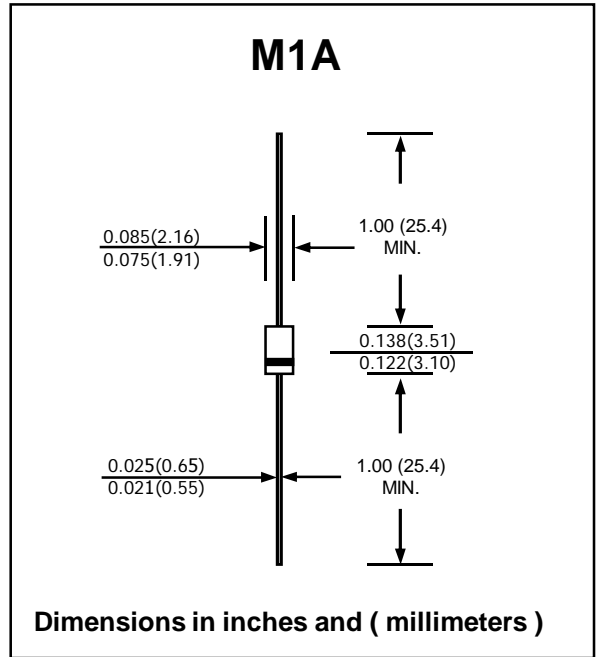
**PRV : 1200 - 2000 Volts**  
**Io : 0.5 Ampere**

### FEATURES :

- \* Glass passivated junction
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : M1A Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.20 gram (approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

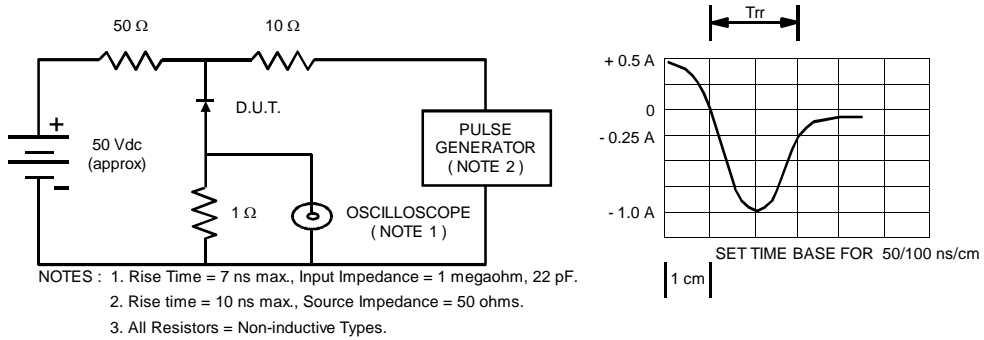
RATING	SYMBOL	RGP02-12ES	RGP02-14ES	RGP02-16ES	RGP02-18ES	RGP02-20ES	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1200	1400	1600	1800	2000	V
Maximum RMS Voltage	$V_{RMS}$	840	980	1120	1260	1400	V
Maximum DC Blocking Voltage	$V_{DC}$	1200	1400	1600	1800	2000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	0.5					A
Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	20					A
Maximum Peak Forward Voltage at 0.1 Amp.	$V_F$	1.8					V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	$I_R$	5.0					$\mu\text{A}$
	$I_{R(H)}$	50					$\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	300					ns
Typical Junction Capacitance ( Note 2 )	$C_J$	5.0					pF
Junction Temperature Range	$T_J$	- 65 to + 150					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150					$^\circ\text{C}$

**Notes :**

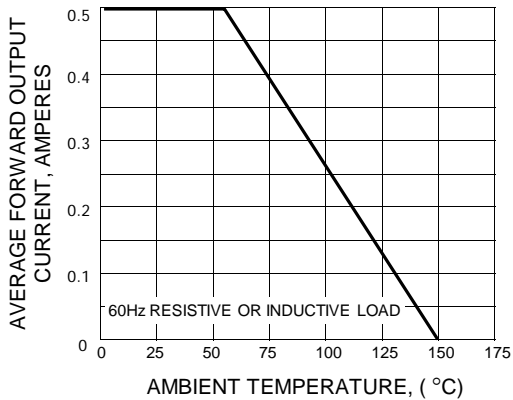
- ( 1 ) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

**RATING AND CHARACTERISTIC CURVES ( RGP02-12ES - RGP02-20ES )**

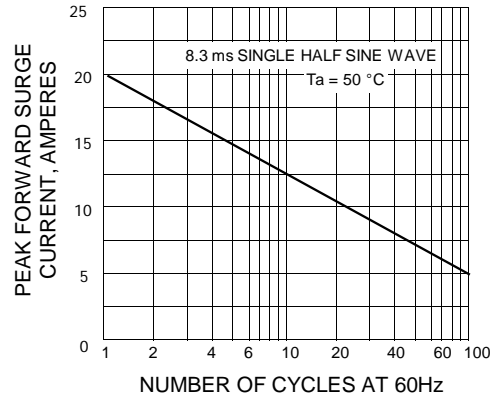
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



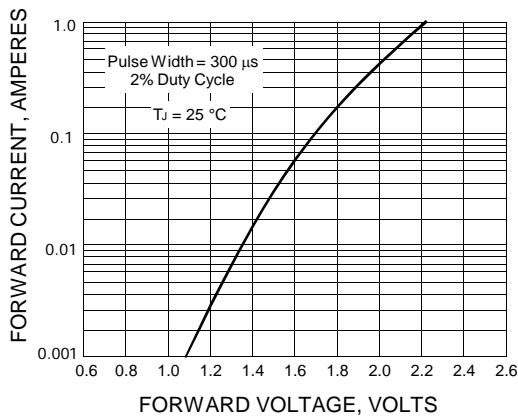
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

