

# RGP02-12E // 20E

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

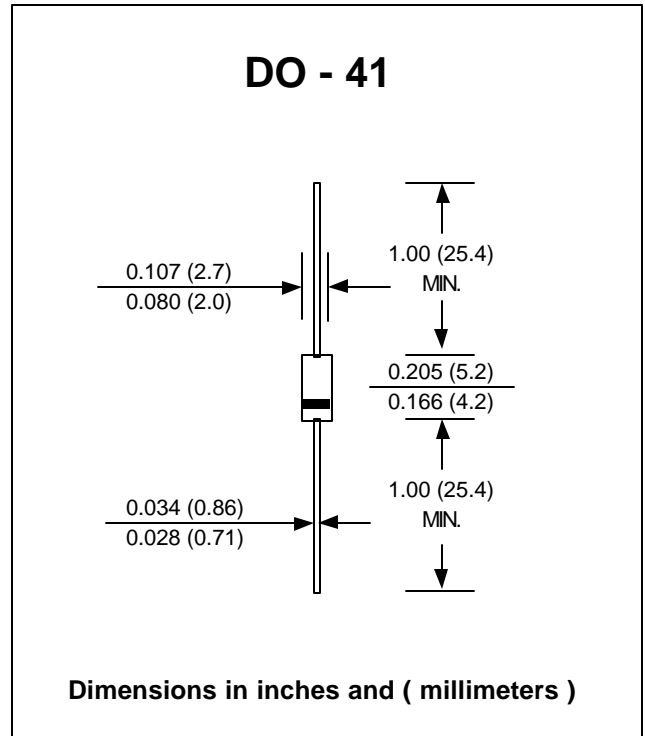
## FEATURES :

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

## MECHANICAL DATA :

- \* Case : DO-41 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 : 0.339 gram

## HIGH VOLTAGE FAST RECOVERY RECTIFIERS



## 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%.

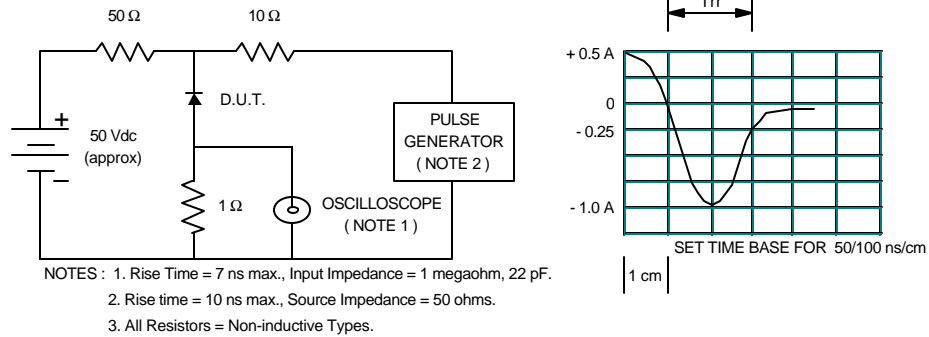
RATING	SYMBOL	RGP 02-12E	RGP 02-14E	RGP 02-16E	RGP 02-18E	RGP 02-20E	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1200	1400	1600	1800	2000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	840	980	1120	1260	1400	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1200	1400	1600	1800	2000	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length      Ta = 55 °C	I <sub>F(AV)</sub>	0.5					Amps.
Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	20					Amps.
Maximum Peak Forward Voltage at 0.5 Amp.	V <sub>F</sub>	2.5					Volts
Maximum DC Reverse Current      Ta = 25 °C	I <sub>R</sub>	5.0					μA
at Rated DC Blocking Voltage      Ta = 100 °C	I <sub>R(H)</sub>	50					μA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	300					ns
Typical Junction Capacitance ( Note 2 )	C <sub>J</sub>	5.0					pf
Junction Temperature Range	T <sub>J</sub>	- 65 to + 150					°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150					°C

### Notes :

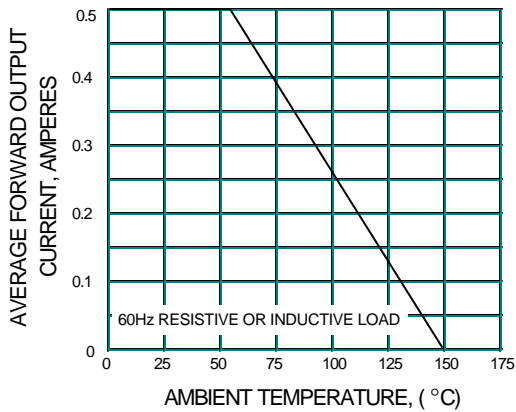
- ( 1 ) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

## RATING AND CHARACTERISTIC CURVES ( RGP02-12E - RGP02-20E )

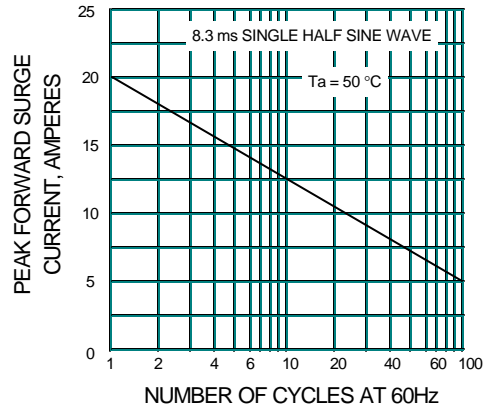
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



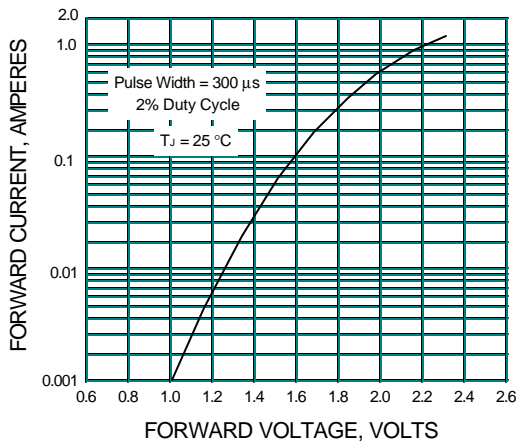
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



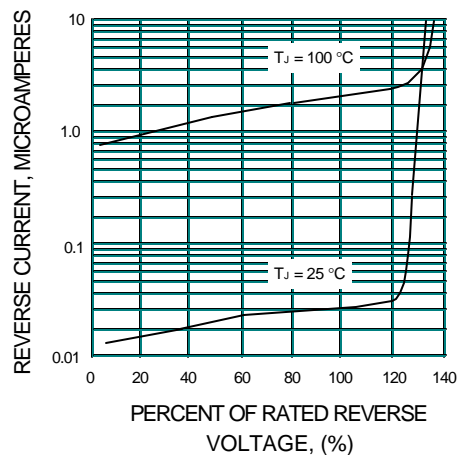
**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**



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Datasheets for electronics components.