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# RGP10A - RGP10M

## Features

- 1.0 ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway.
- High temperature metallurgically bonded construction.
- Glass passivated cavity-free junction.
- Typical  $I_R$  less than  $1\mu\text{A}$ .
- Fast switching for high efficiency.



**DO-41**  
 COLOR BAND DENOTES CATHODE

## Fast Rectifiers (Glass Passivated)

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value							Units
		10A	10B	10D	10G	10J	10K	10M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375" lead length @ $T_L = 55^\circ\text{C}$	1.0							A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	30							A
$T_{stg}$	Storage Temperature Range	-65 to +175							$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +175							$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

## Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	3.0	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C}/\text{W}$

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Device							Units
		10A	10B	10D	10G	10J	10K	10M	
V <sub>F</sub>	Forward Voltage @ 1.0 A	1.3							V
t <sub>rr</sub>	Reverse Recovery Time I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A	150				250	500		ns
I <sub>R</sub>	Reverse Current @ rated V <sub>R</sub> T <sub>A</sub> = 25°C T <sub>A</sub> = 150°C	5.0 200							μA μA
C <sub>T</sub>	Total Capacitance V <sub>P</sub> = 4.0 V, f = 1.0 MHz	15							pF

## Typical Characteristics

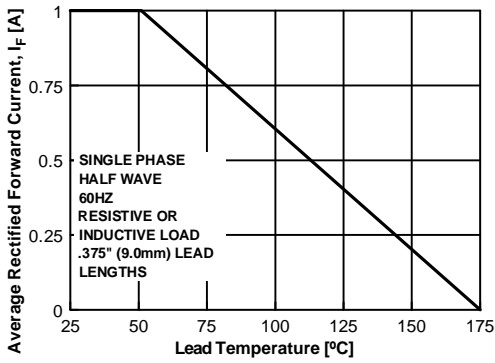


Figure 1. Forward Current Derating Curve

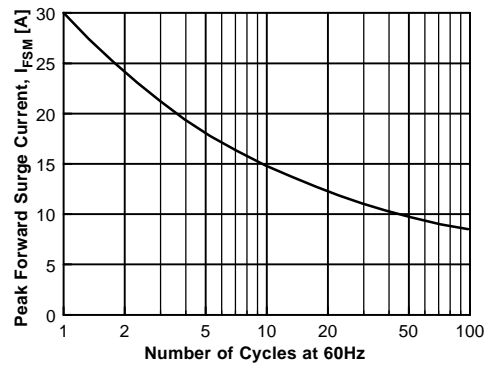


Figure 2. Non-Repetitive Surge Current

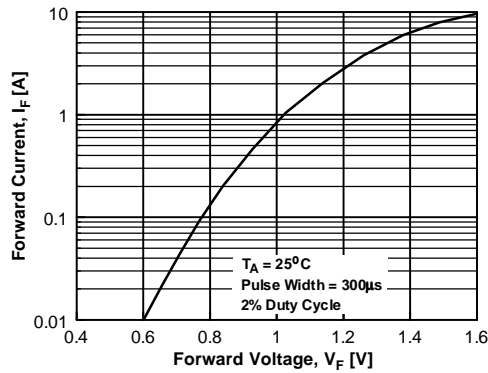


Figure 3. Forward Voltage Characteristics

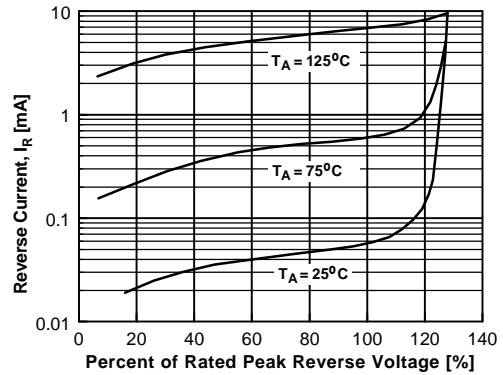


Figure 4. Reverse Current vs Reverse Voltage

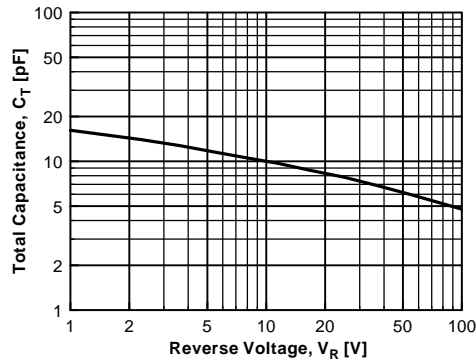
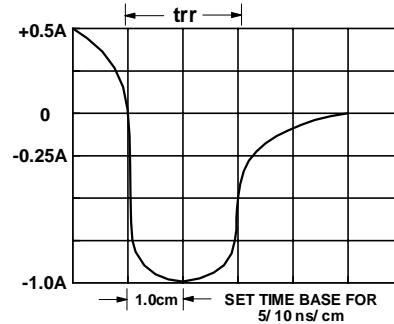
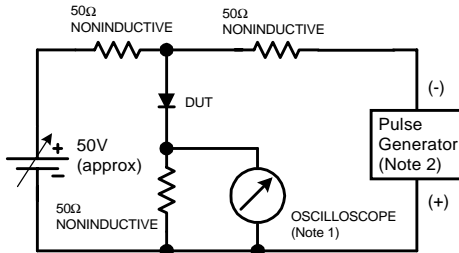


Figure 5. Total Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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