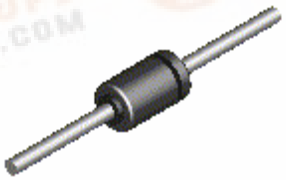
FAIRCHILD SEMICONDUCTOR TM

Discrete POWER & Signal Technologies

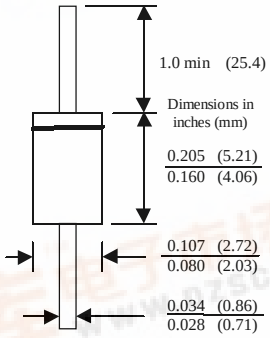
RGP10A - RGP10M

Features

- 1.0 ampere operation at T_A = 55°C with no thermal runaway.
- High temperature metallurgically bonded construction.
- Glass passivated cavity-free junction.
- Typical I_R less than 1µA.
- Fast switching for high efficiency.



DO-41
COLOR BAND DENOTES CATHODE



1.0 Ampere Glass Passivated Fast Recovery Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current .375 " lead length @ T_L = 55°C	1.0	A
$i_{f(surge)}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
P_D	Total Device Dissipation Derate above 25°C	2.5 17	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	°C/W
T_{stg}	Storage Temperature Range	-65 to +175	°C
T_J	Operating Junction Temperature	-65 to +175	°C

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

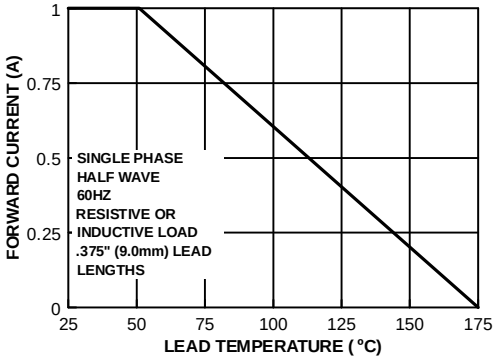
Electrical Characteristics

T_A = 25°C unless otherwise noted

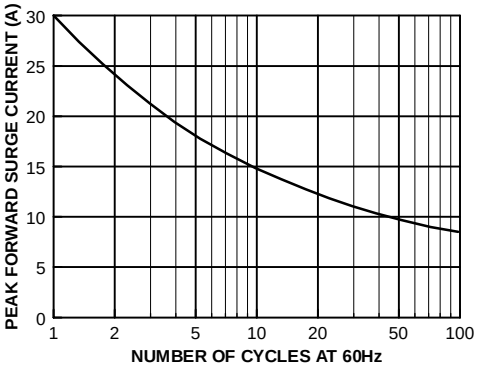
Parameter	Device							Units
	10A	10B	10D	10G	10J	10K	10M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R T_A = 25°C T_A = 150°C	5.0 200							µA µA
Maximum Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	150				250	500		nS
Maximum Forward Voltage @ 1.0 A	1.3							V
Typical Junction Capacitance V_R = 4.0 V, f = 1.0 MHz	15							pF

Typical Characteristics

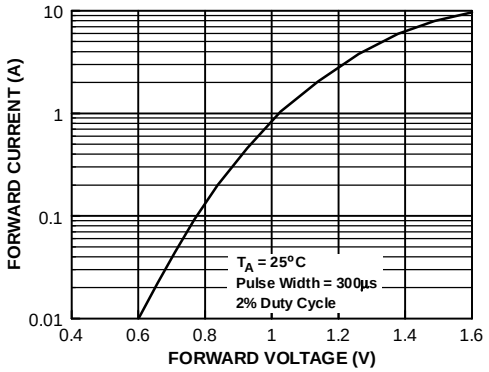
Forward Current Derating Curve



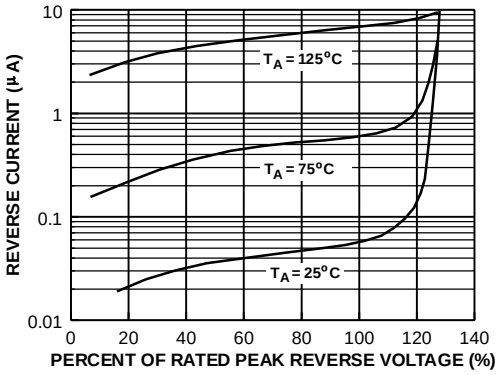
Non-Repetitive Surge Current



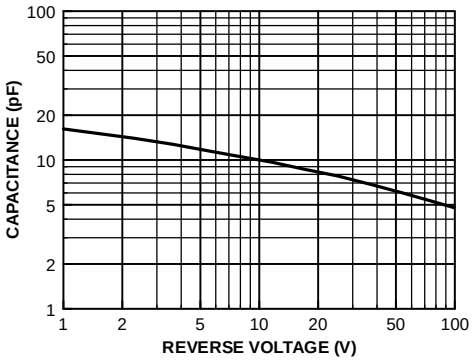
Forward Characteristics

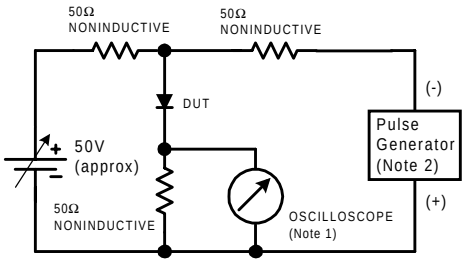


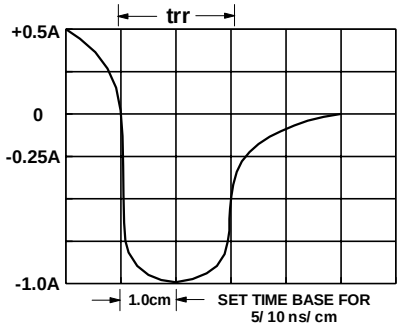
Reverse Characteristics



Junction Capacitance







Reverse Recovery Time Characterstic and Test Circuit Diagram

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