



RGF1A - RGF1M

Features

- Glass passivated junction.
- For surface mounted application.
- Low forward voltage drop.
- High current capability.
- Easy pick and place.
- High surge current capability.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE

Fast Rectifiers

Absolute Maximum Ratings*

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

Symbol	Parameter	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ $T_A = 125^\circ\text{C}$				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	1.76	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient*	85	$^\circ\text{C/W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead*	28	$^\circ\text{C/W}$

*Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics

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

Symbol	Parameter	Device							Units
		1A	1B	1D	1G	1J	1K	1M	
V_F	Forward Voltage @ 1.0 A				1.3				V
t_{rr}	Reverse Recovery Time $I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{rr} = 0.25 \text{ A}$			150		250		500	ns
I_R	Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$				5.0		100		μA
C_T	Total Capacitance $V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$				8.5				pF

Typical Characteristics

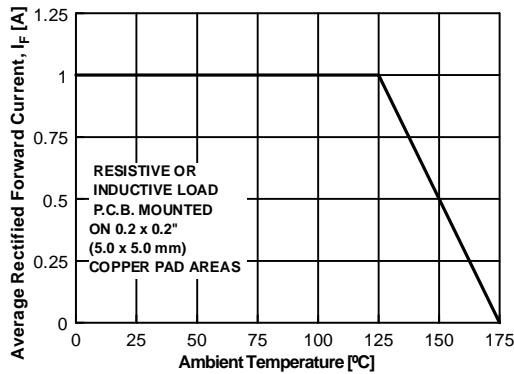


Figure 1. Forward Current Derating Curve

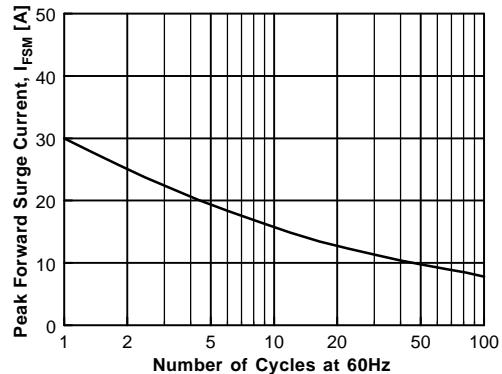


Figure 2. Non-Repetitive Surge Current

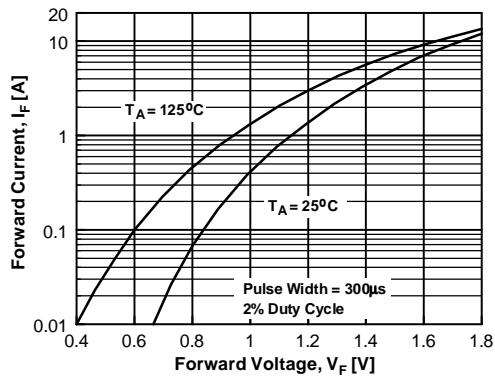


Figure 3. Forward Voltage Characteristics

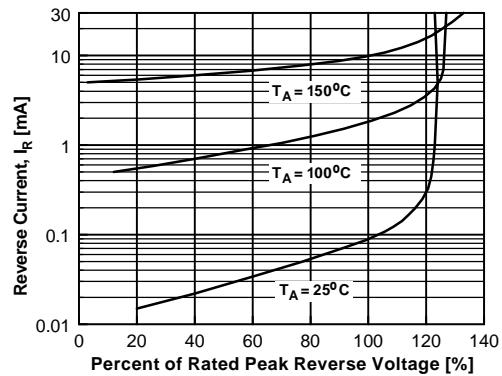


Figure 4. Reverse Current vs Reverse Voltage

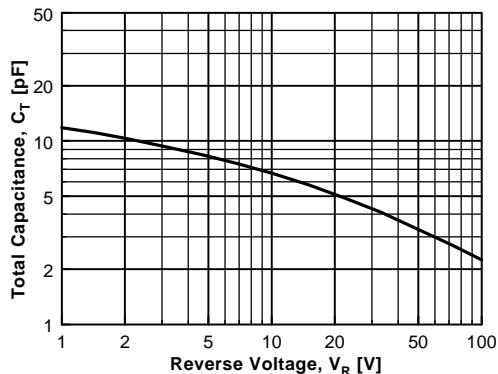


Figure 5. Total Capacitance

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