

Description

The RG1C is a high voltage fast recovery diode of 1000 V / 0.7 A. The maximum t_{rr} of 100 ns is realized by optimizing a life-time control.

Features

•	V _{RM}	1000 V
	I _{F(AV)}	
	$ m V_F$	
•	t _{rr1}	100 ns

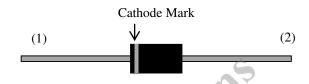
• Bare Leads: Pb-free (RoHS Compliant)

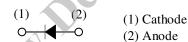
Applications

Act Recommended for Act • Snubber Diode (Flyback Converter, etc.)

Package

Axial ($\phi 4 \times 7.2$ L / $\phi 0.78$)





(2) Anode

Not to scale

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25$ °C

Parameter	Symbol	Rating	Unit	Conditions
Peak Repetitive Reverse Voltage	V _{RSM}	1000	V	
Repetitive Reverse Voltage	V _{RM}	1000	V	
Average Forward Current	$I_{F(AV)}$	0.7	A	See Figure 2 and Figure 3
Surge Forward Current	I_{FSM}	10	A	Half cycle sine wave, positive side, 10 ms, 1 shot
I ² t Limiting Value	I^2t	0.5	A^2s	$1 \text{ ms} \le t \le 10 \text{ ms}$
Junction Temperature	T_{J}	-40 to 150	°C	
Storage Temperature	T_{STG}	-40 to 150	°C	

Electrical Characteristics

Unless otherwise specified, $T_A = 25$ °C

Parameter	Symbol	Conditions	Min.	Тур.	Max.	Unit		
Coursed Valtage Duen	V_{F}	$T_J = 25 ^{\circ}\text{C}, I_F = 0.7 \text{A}$	_	_	3.3	V		
Forward Voltage Drop		$T_J = 100 ^{\circ}\text{C}, I_F = 0.7 \text{A}$	_	1.7	_	V		
Reverse Leakage Current	I_R	$V_R = V_{RM}$	_		20	μΑ		
Reverse Leakage Current Under High Temperature	$H \cdot I_R$	$V_R = V_{RM}$, $T_J = 150$ °C	_		250	μΑ		
	t _{rr1}	$I_F = I_{RP} = 100 \text{ mA}$ 90% recovery point, $T_J = 25 \text{ °C}$	_		100	ns		
Reverse Recovery Time	t _{n2}	$I_F = 100 \text{ mA},$ $I_{RP} = 200 \text{ mA},$ 75% recovery point, $T_J = 25 \text{ °C}$	_	_	50	ns		
Thermal Resistance (1)	$R_{\text{th(J-L)}}$	See Figure 1			15	°C/W		
T _L 12.5 mm Device 1.6 mm								

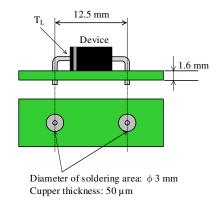
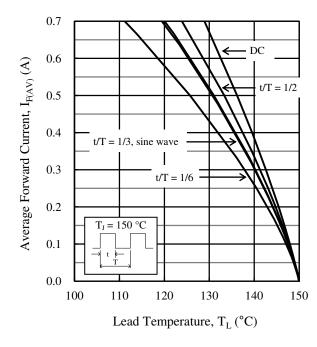


Figure 1 Lead Temperature Measurement Conditions

 $^{^{(1)}\,}R_{\text{th (J-L)}}$ is thermal resistance between junction and lead.

Rating and Characteristic Curves



 $Figure~2.~~I_{F(AV)}~vs.~T_L~Typical~Characteristics^{(2)}\\$ $(V_R = 0 V)$

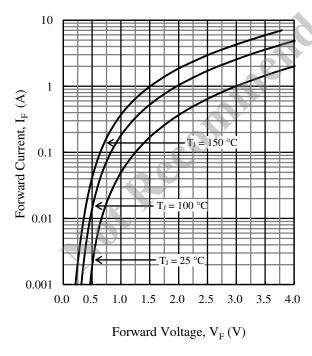
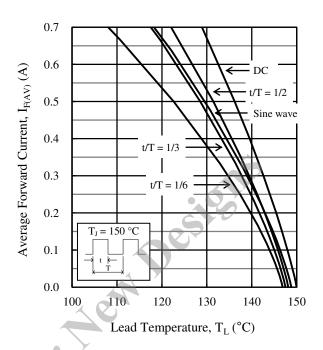


Figure 4. V_F vs. I_F Typical Characteristics



 $I_{F(AV)} \ vs. \ T_L \ Typical \ Characteristics^{(2)}$ Figure 3. $(V_R = 1000 \text{ V})$

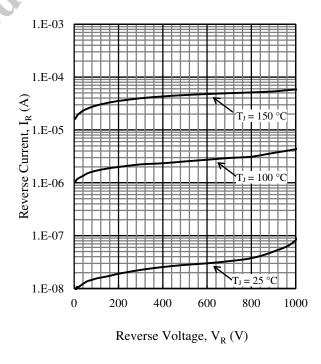
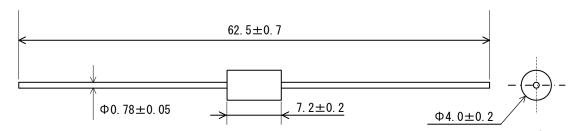


Figure 5. V_R vs. I_R Typical Characteristics

⁽²⁾ See Figure 1 for the lead temperature measurement conditions.

Physical Dimensions

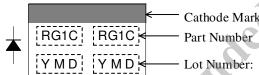
• Axial $(\phi 4 \times 7.2 L / \phi 0.78)$



NOTES:

- Dimensions in millimeters
- Bare leads: Pb-free (RoHS compliant)
- When soldering the products, it is required to minimize the working time, within the following limits:
 Flow: 260 ± 5 °C / 10 ± 1 s, 2 times
 Soldering Iron: 380 ± 10 °C / 3.5 ± 0.5 s, 1 time (Soldering should be at a distance of at least 1.5 mm from the body of the product.)

Marking Diagram



Y is the last digit of the year of manufacture (0 to 9)

M is the month of the year (1 to 9, O, N or D)

D is the period of days represented by:

• : the first 10 days of the month (1st to 10th)

•• : the second 10 days of the month (11th to 20th)

••• : the last 10–11 days of the month (21st to 31st)

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