

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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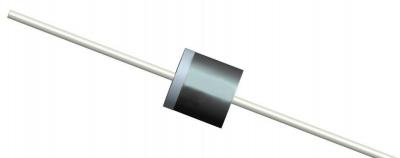
Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

## FR601G THRU FR607G

### GLASS PASSIVATED FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes



R-6

#### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

#### Circuit Diagram



#### Mechanical Data

- Case: R-6 molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 2.1 grams

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

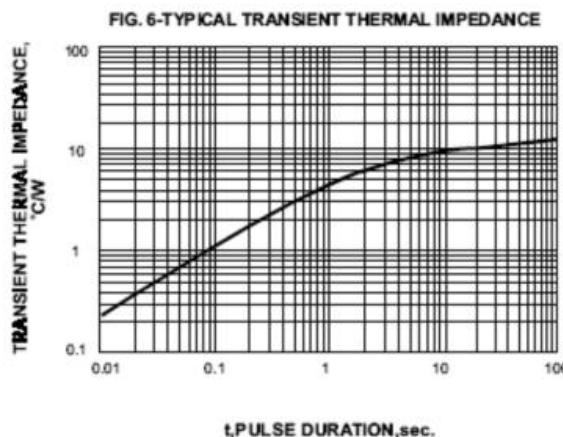
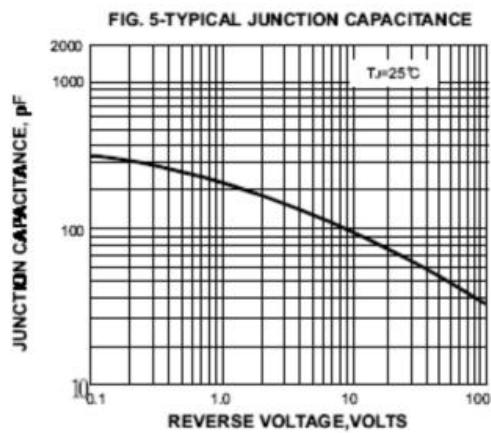
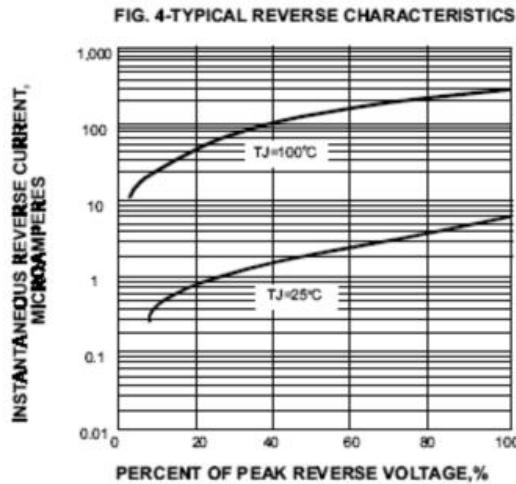
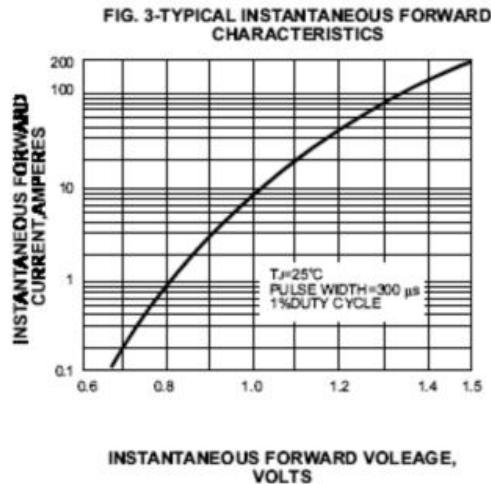
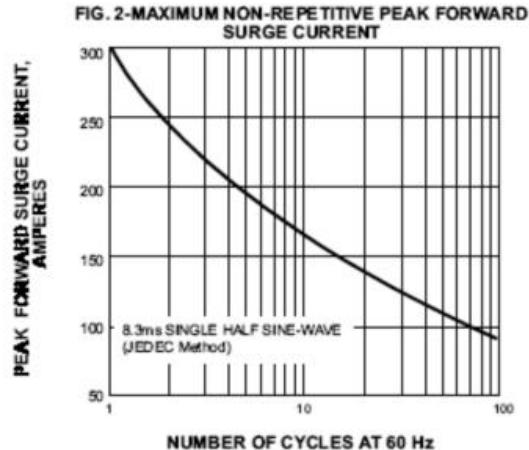
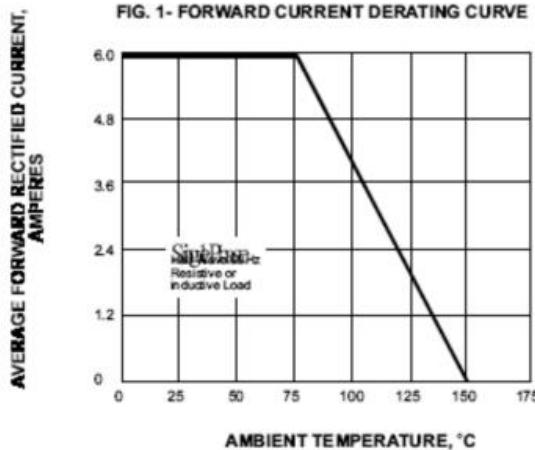
Characteristic	Symbol	FR 601G	FR 602G	FR 603G	FR 604G	FR 605G	FR 606G	FR 607G	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$								
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at @ $T_A = 75^\circ\text{C}$	$I_{(AV)}$								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$								A
Maximum instantaneous forward voltage at 6.0A	$V_F$								V
Maximum DC reverse current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$								$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$				150	250	500		ns
Typical Junction Capacitance (Note 2)	$C_J$				150				pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$				10				$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$				-65 to +150				$^\circ\text{C}$
Operating storage temperature range	$T_{STG}$				-65 to +150				$^\circ\text{C}$

#### \*Glass passivated forms are available upon request

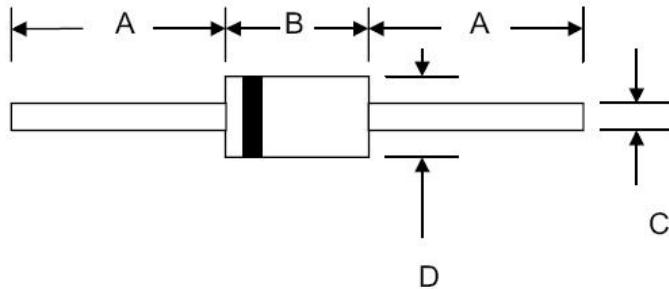
Note: 1. Reverse recovery condition  $IF=0.5\text{A}$ ,  $IR=1.0\text{A}$ ,  $Irr=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

## Ratings and Characteristics Curves



## Mechanical Dimensions R-6



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

## Ordering Information

Device	Package	Shipping
FR601G-FR607G	R-6 (Pb-Free)	500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

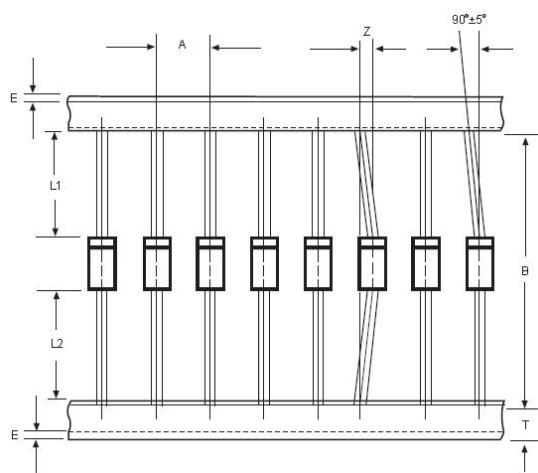


Where XXXXX is YYWWL

FR601G = Part Name  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

## Carrier Tape Specification R-6



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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