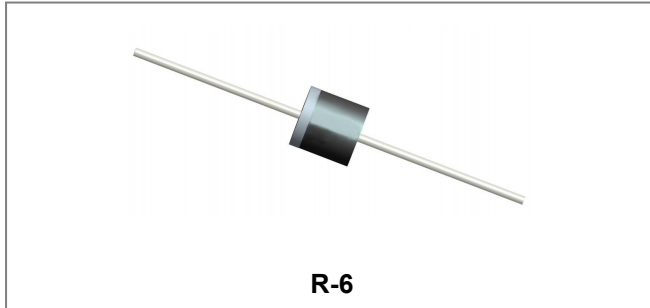


FR601G THRU FR607G

GLASS PASSIVATED FAST RECOVERY RECTIFIERS

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



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°C unless otherwise specified

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

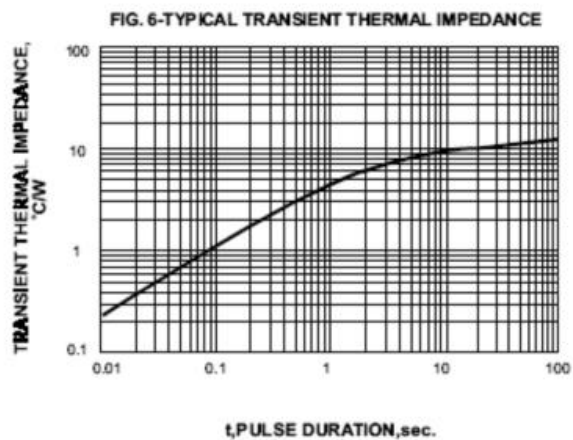
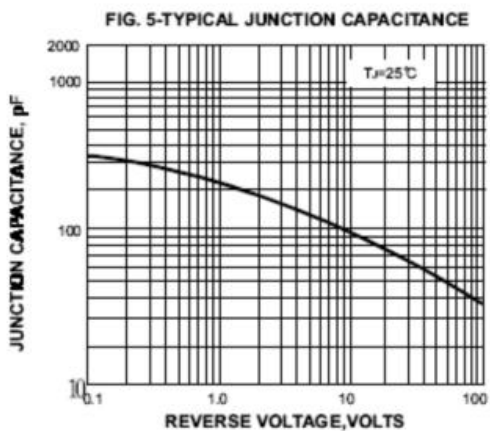
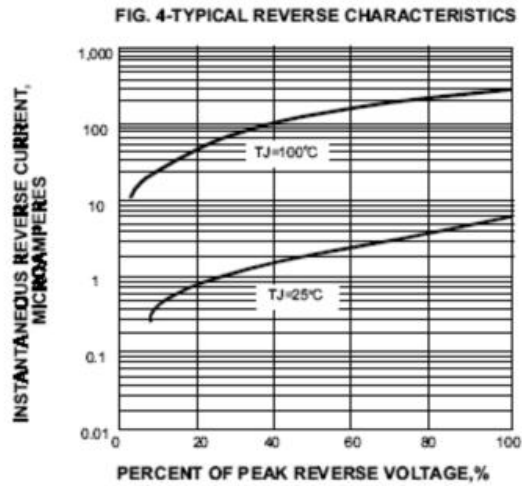
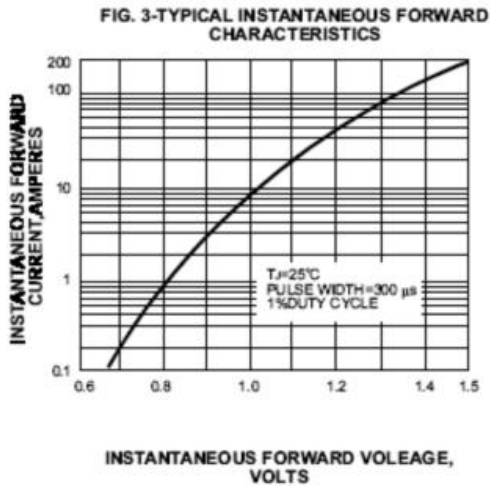
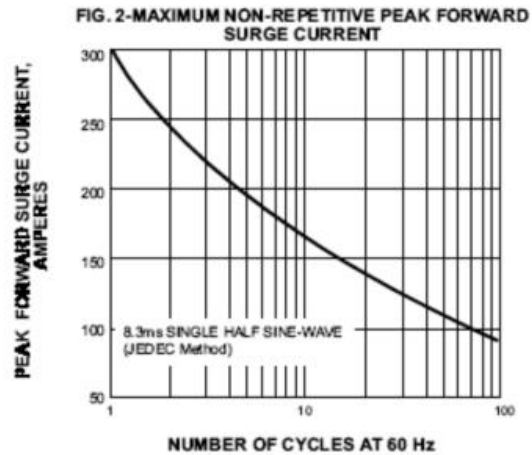
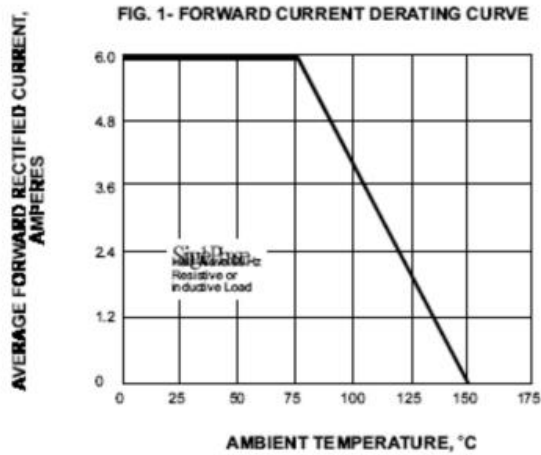
Characteristic	Symbol	FR 601G	FR 602G	FR 603G	FR 604G	FR 605G	FR 606G	FR 607G	Units
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V _{RRM} V _{DC}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at @T _A = 75°C	I _(AV)	6.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300							A
Maximum instantaneous forward voltage at 6.0A	V _F	1.3							V
Maximum DC reverse current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	10 200							µA
Maximum reverse recovery time (Note 1)	t _r	150				250	500		ns
Typical Junction Capacitance (Note 2)	C _J	150							pF
Typical Thermal Resistance Junction to Ambient (Note 3)	R _{θJA}	10							°C/W
Operating junction temperature range	T _J	-65 to +150							°C
Operating storage temperature range	T _{STG}	-65 to +150							°C

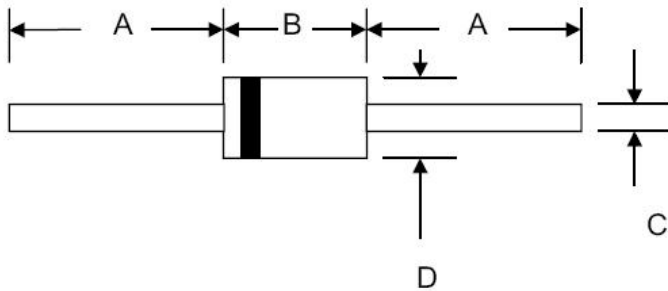
*Glass passivated forms are available upon request

- Note: 1. Reverse recovery condition I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
 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 •

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 / Tape
FR601GTA-FR607GTA	R-6(Pb-Free)	500pcs / Tape
FR601GTR-FR607GTR	R-6(Pb-Free)	500pcs / reel

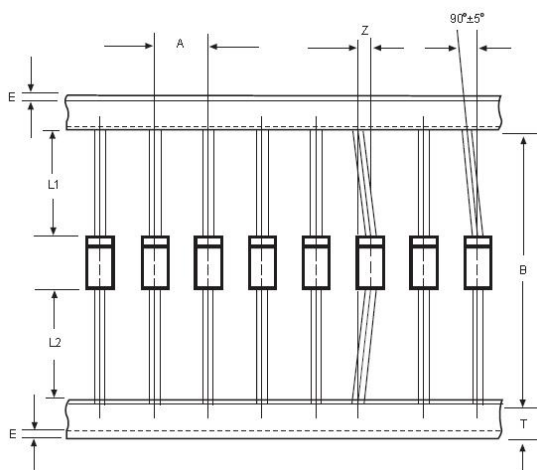
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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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