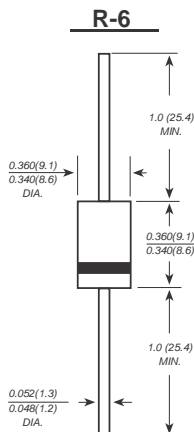




# FR601G THRU FR607G

## FAST RECOVERY GLASS PASSIVATED RECTIFIERS

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



Dimensions in inches and (millimeters)

Mounting Position: Any

### 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:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** R-6 molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.072 ounce, 2.05 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

	SYMBOLS	FR 601G	FR 602G	FR 603G	FR 604G	FR 605G	FR 606G	FR 607G	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> =75 C	I <sub>(AV)</sub>	6.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300.0							Amps
Maximum instantaneous forward voltage at 6.0A	V <sub>F</sub>	1.3							Volts
Maximum DC reverse current     T <sub>A</sub> =25 C at rated DC blocking voltage    T <sub>A</sub> =100 C	I <sub>R</sub>	10.0 200.0							μA
Maximum reverse recovery time     (NOTE 1)	t <sub>rr</sub>	150				250	500		ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	150.0							pF
Typical thermal resistance (NOTE 3)	R <sub>JA</sub>	10.0							C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							C

**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

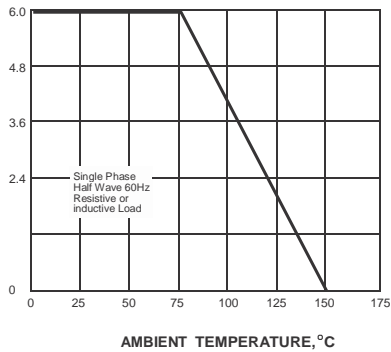
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES FR601G THRU FR607G

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

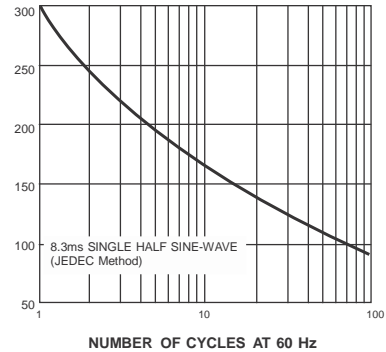
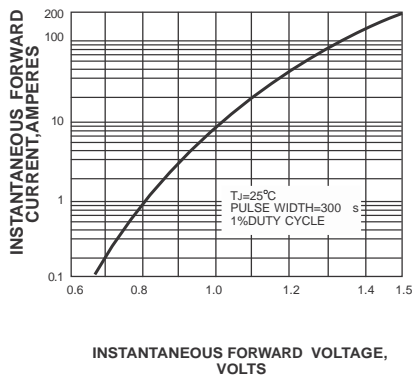


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

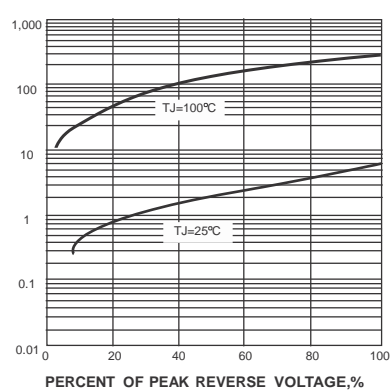
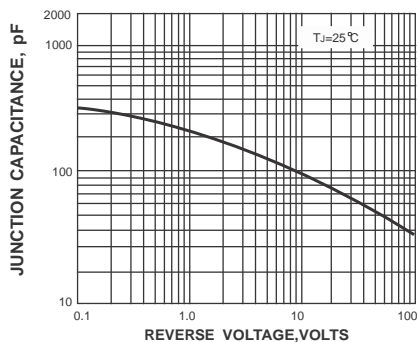


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

