



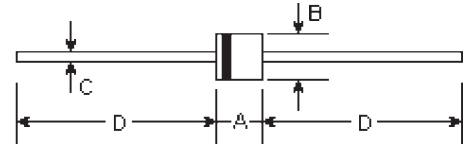
FR601 THRU FR607

FAST RECOVERY RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 6.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Construction utilizes void-free molded plastic technique
- 6.0 ampere operation at $T_A = 75^\circ\text{C}$ with no thermal runaway
- High temperature soldering guaranteed: $250^\circ\text{C}/10$ seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

R-6



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
- **Mounting Position:** Any
- **Weight:** 0.074 ounce, 2.1 grams

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.339	0.358	8.6	9.1	
B	0.339	0.358	8.6	9.1	φ
C	0.047	0.052	1.2	1.3	φ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics @25°C unless otherwise specified

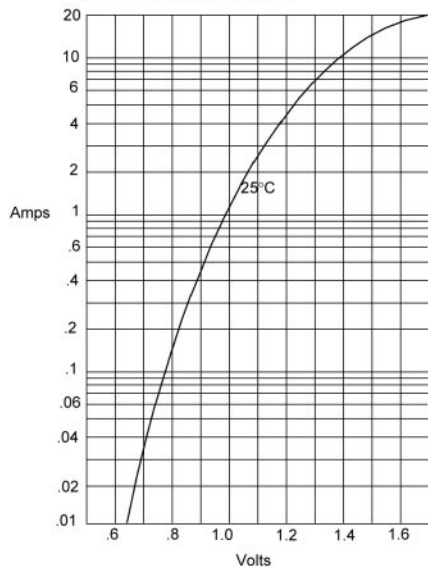
	Symbols	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Units
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Average forward rectified current at T _A =75 °C	I _(AV)	6.0							Amps
Peak forward surge current 8.3mS single half sine-wave (MIL-STD-750D 4066 method)	I _{FSM}	300.0							Amps
Maximum instantaneous forward voltage at I _{FM} =6.0A, T _A =25 °C (Note 3)	V _F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage T _A =25 °C T _A =55 °C	I _R	10.0 150.0							μ A
Maximum reverse recovery time (Note 1)	T _{rr}	150				250	500		nS
Typical junction capacitance (Note 2)	C _J	150.0							p F
Operating and storage temperature range	T _J , T _{STG}	-65 to +150							°C

Notes:

- (1) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Pulse test: pulse width 300μSec, Duty cycle 1%

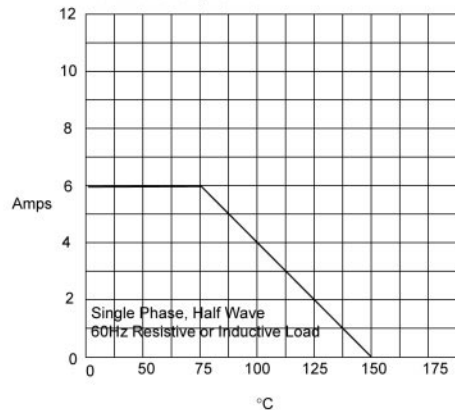
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



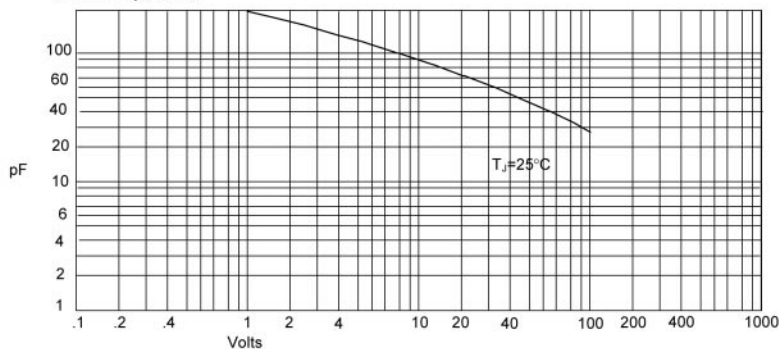
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

RATINGS AND CHARACTERISTIC CURVES

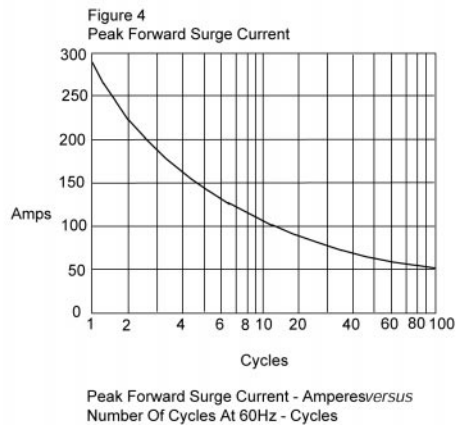


Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

