

6.0 A Fast Recovery Silicon Rectifier
Rectifier Reverse Voltage 50 to 1000V

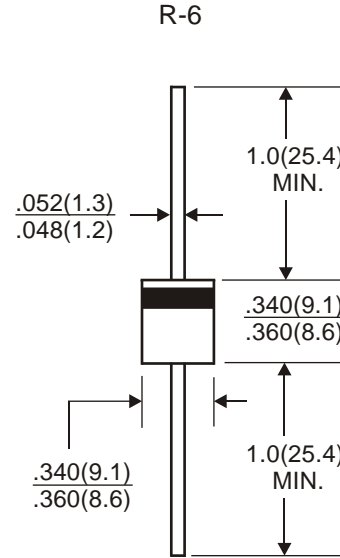


Features

- Diffused junction
- Fast switching for high efficiency
- High current capability and low Forward Voltage Drop
- Surge overload rating to 300A peak
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

Case: Molded plastic
 Terminals: Solder plated solderable per MIL-STD-202, Method 208
 Polarity: Cathode band
 Mounting Position: Any
 Weight: 2.1 grams (approx)



All dimensions inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
 For Capacitive load derate current by 20%.

Parameter	Symbol	FR601	FR602	FR603	FR604	FR605	FR606	FR607	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	v
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	v
Maximum average forward rectified output current at TA=75°C	IF(AV)	6.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	300							A
Maximum reverse recovery time TJ=25°C	Trr	150			250		500		nS
Typical thermal resistance per element	ReJA	10							°C/W
Typical junction capacitance per element	Cj	100							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
 For Capacitive load derate by 20 %.

Parameter	Symbol	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Unit	
Maximum instantaneous forward voltage drop per leg at 6.0A	VF	1.3								V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	5.0			50.0				µA	

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) FR601 thru FR607

Fig. 1 Reverse Recovery Time and Test Circuit Diagram

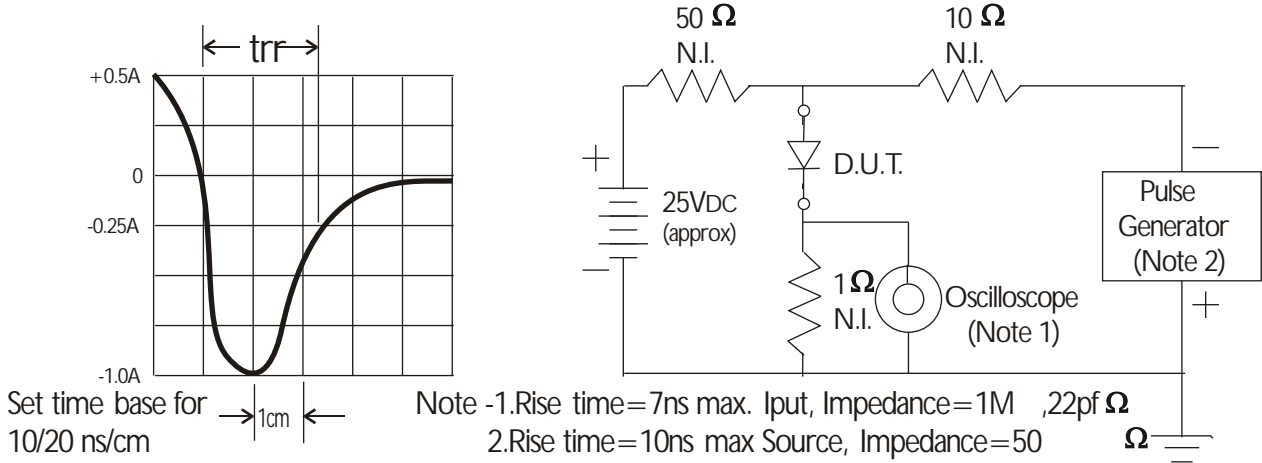


Fig. 2 Derating Curve for Output Rectified Current

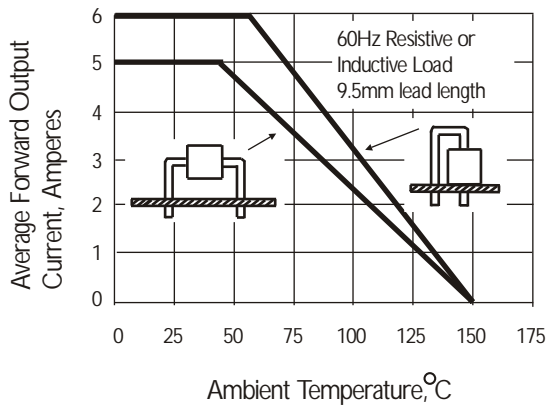


Fig. 3 Derating Curve for Output Rectified Current

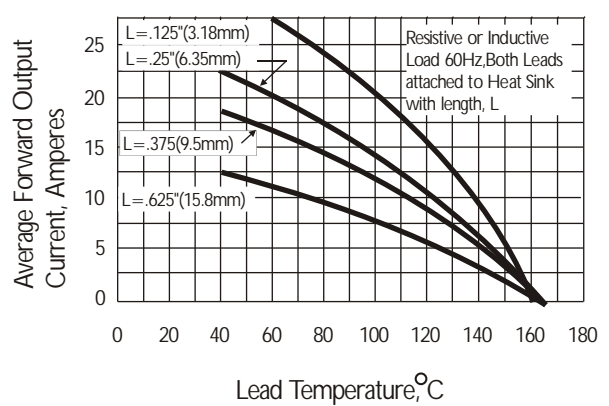


Fig. 4 Typical Instantaneous Forward Characteristics

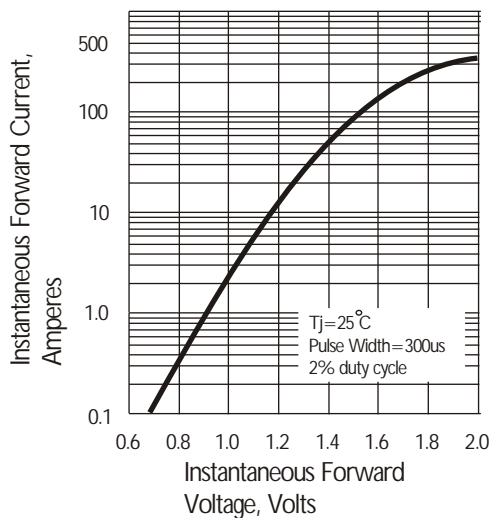


Fig. 5 Peak Forward Surge Current

