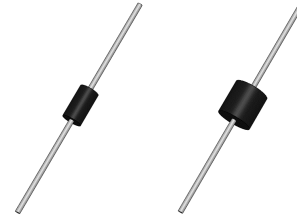


## 6A,50-1000V Fast Recovery Rectifiers

### Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



R-6/P600

### Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)									
Parameter	Symbol	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	6							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	200							A
Operating junction temperature range	T <sub>J</sub>	-55 to +135							°C
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	29	°C / W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	14	°C / W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	8	°C / W

## Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

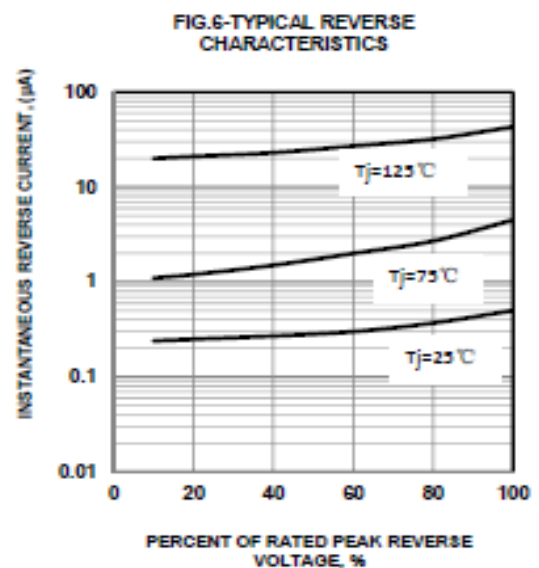
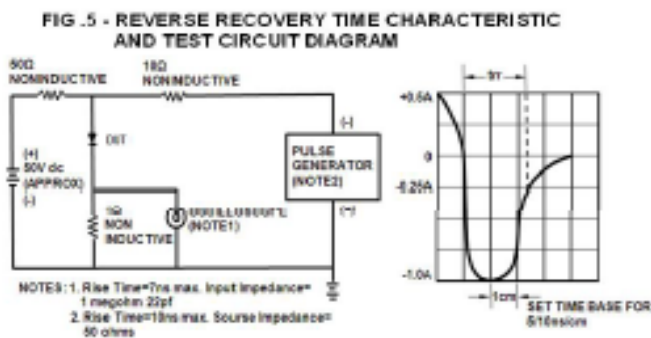
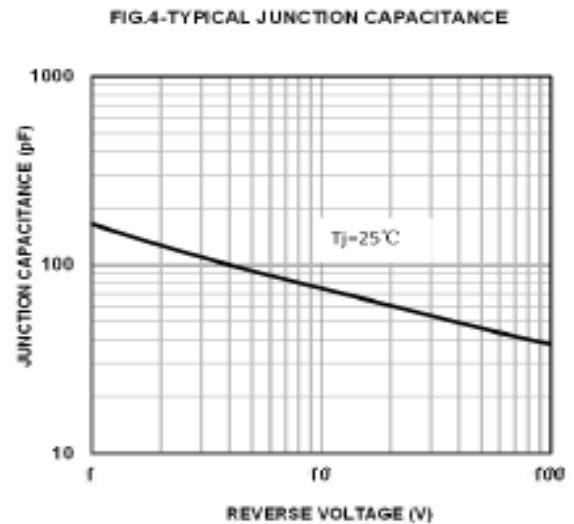
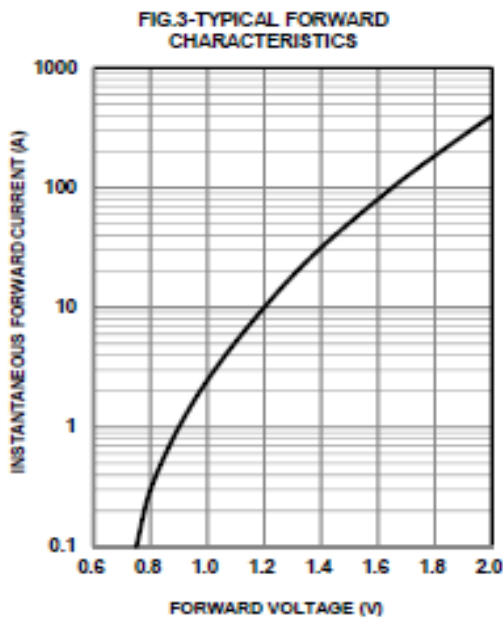
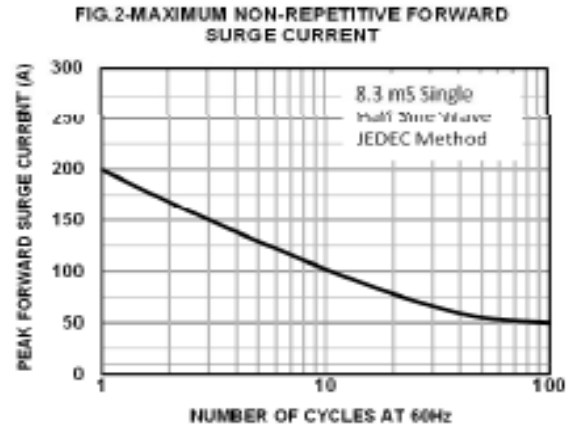
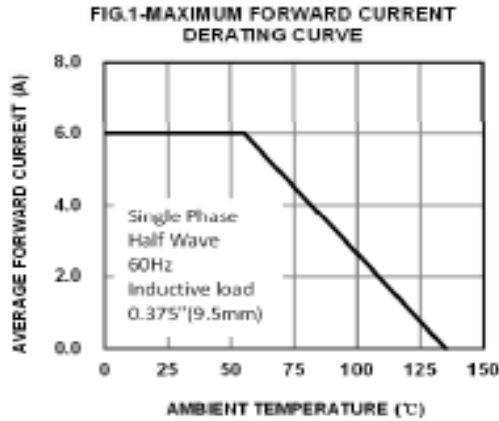
Parameter	Symbol	Test Conditions	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Unit	
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =6A	1.30							V	
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	10							uA	
		T <sub>J</sub> =125°C	200								
Typical junction capacitance	C <sub>J</sub>	4.0 V 1 MHz	100							pF	
Maximum reverse recovery time	trr	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	150				250		500		nS

Note:

- Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

## Ratings and Characteristics Curves

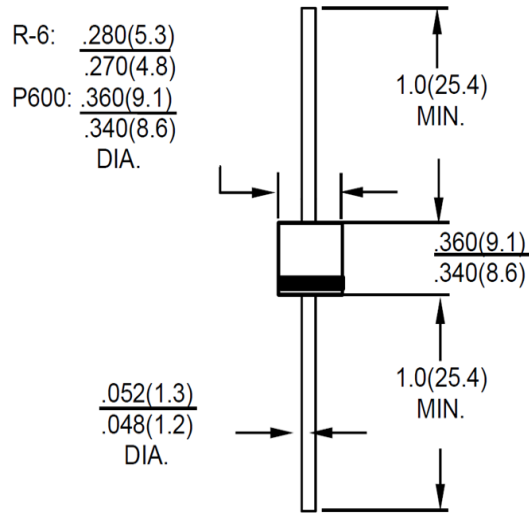
( $T_A = 25^\circ\text{C}$  unless otherwise noted)



## Package Outline Dimensions

in inches (millimeters)

### R-6/P600



Dimensions in inches and (millimeters)

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2024.02.28	Modify document format

## **Disclaimers**

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.

(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.