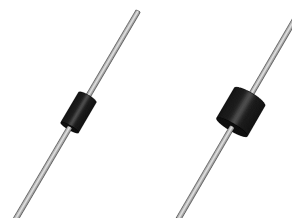


## 6A,50-1000V Fast Recovery Rectifiers

### 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	FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G	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>	250							A
Operating junction temperature range	T <sub>J</sub>	-55 to +150							°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>	18	°C / W



# FR601G thru FR607G

GOOD-ARK Electronics

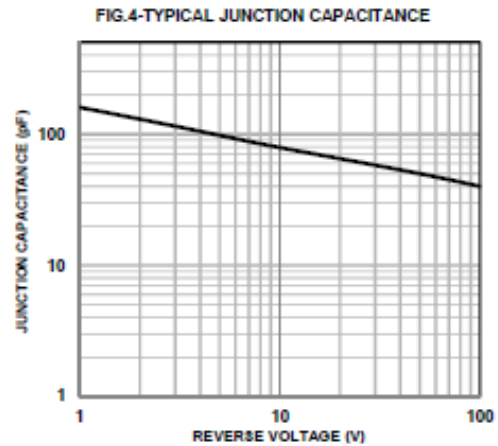
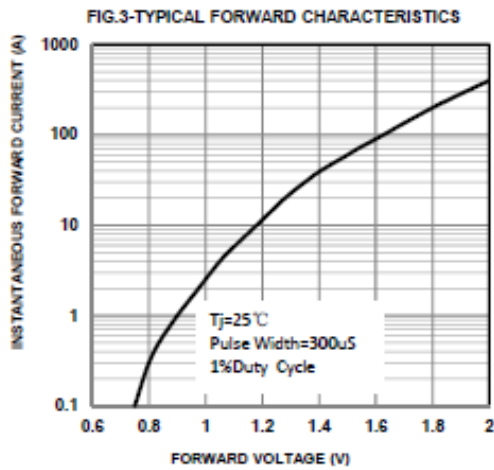
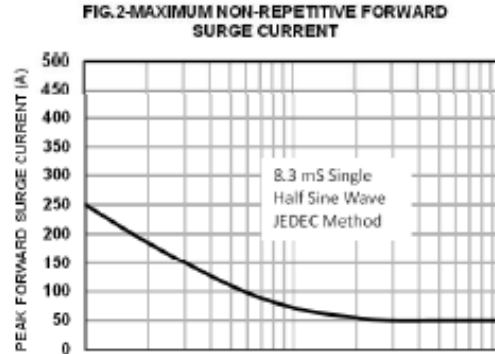
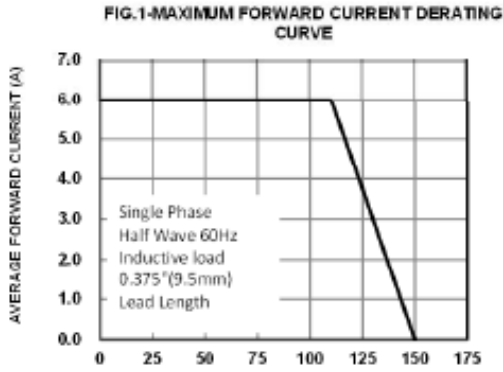
Electrical Specifications (T <sub>A</sub> =25°C unless otherwise noted)											
Parameter	Symbol	Test Conditions	FR601G	FR602G	FR603G	FR604G	FR605G	FR606G	FR607G	Unit	
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =6A	1.30								V
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	5								uA
		T <sub>J</sub> =125°C	100								
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:

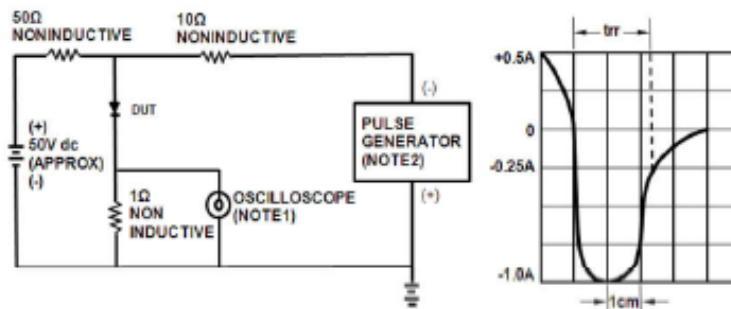
1. Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

## Ratings and Characteristics Curves

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



**FIG.5 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



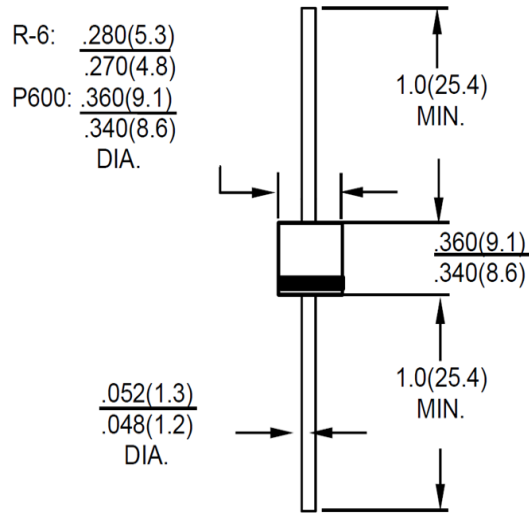
NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance=50 ohms

SET TIME BASE FOR 5/10ns/cm

## 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	2023.11.13	Modify document format

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