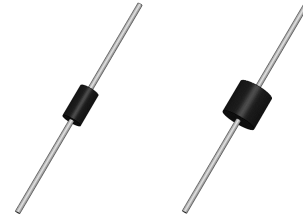


6A,50-1000V Superfast Rectifiers

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_A=25°C unless otherwise noted)

Parameter	Symbol	SF601	SF602	SF603	SF604	SF605	SF606	SF607	SF608	SF609	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	6									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	150									A
Operating junction temperature range	T _J	-55 to +135									°C
Storage temperature range	T _{STG}	-55 to +150									°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	16	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	14	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	8	°C /W



SF601 thru SF609

GOOD-ARK Electronics

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	SF601	SF602	SF603	SF604	SF605	SF606	SF607	SF608	SF609	Unit	
Forward Drop Voltage	V _F	I _F =6A	0.975				1.30		1.70			V	
Reverse leakage current @V _R	I _R	T _J =25°C	5									uA	
		T _J =125°C	100										
Typical junction capacitance	C _J	4.0 V 1 MHz	115					60					pF
Maximum reverse recovery time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	35									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)

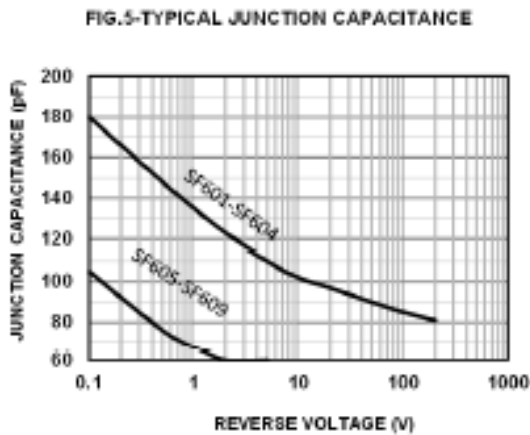
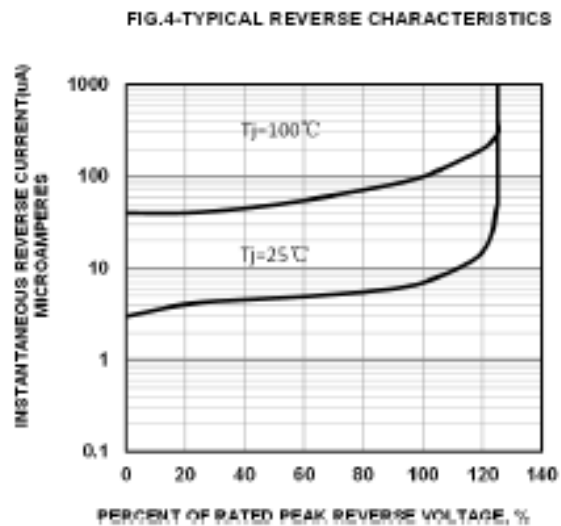
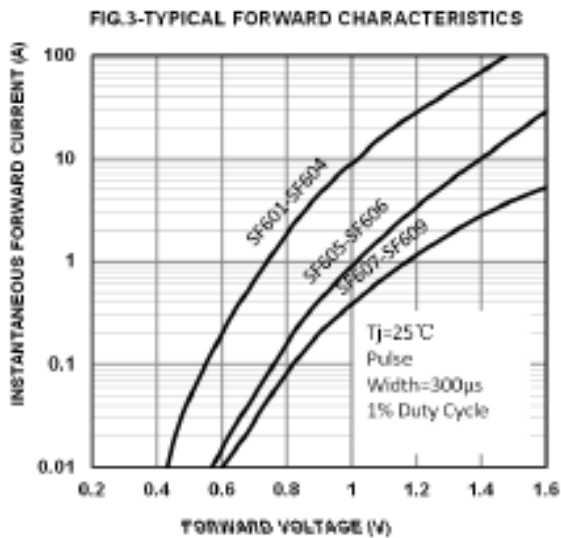
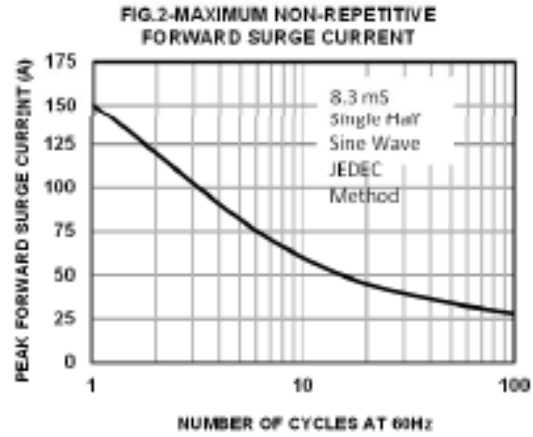
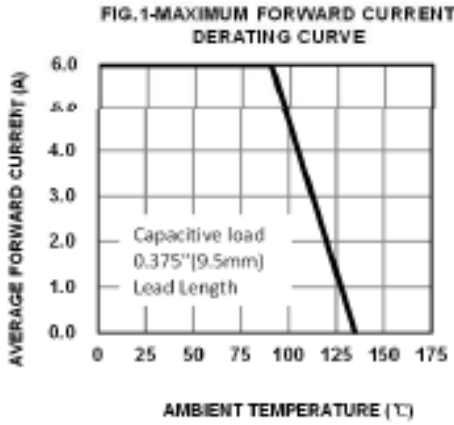
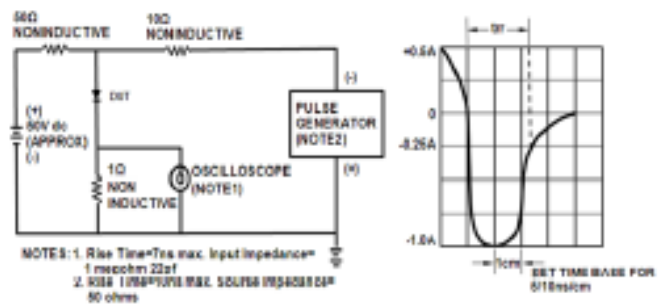


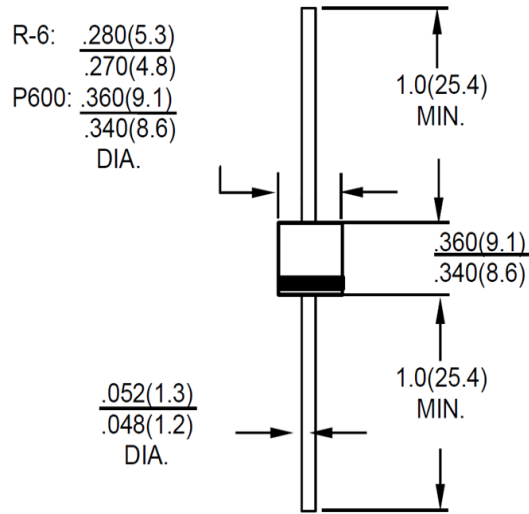
FIG. 8 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

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