

SUPER-FAST RECOVERY RECTIFIERS

REV:1.08

Features	Ultrafast 35 Nanosecond Recovery Time	Typical Reference Data
	175° C Operating Junction Temperature	
	Popular TO-220AC Package	
	Epoxy Meets UL94 ,V0 @ 1/8"	
	High Temperature Glass Passivated Junction	
	Low Forward Voltage	
Low Leakage Current	VRRM= 200V IF(AV)= 8A	
Reverse Voltage to 600 Volts	VRRM= 400V IF(AV)= 8A	
Pb- Free Packages are Available	VRRM= 600V IF(AV)=8A	

Mechanical Characteristics	Case: Epoxy, Molded
	Weight: 1.9 grams (approximately)
	Finish: All External Surfaces Corrosion Resistant and Terminal
	Leads are Readily Solderable
	Lead Temperature for Soldering Purposes: 260° C Max. for 10 Seconds
	Shipped 50 units per plastic tube

MAXIMUM RATINGS

Rating	Symbol	SF802A	SF804A	SF806A	Unit
Peak Repetitive Reverse Voltage	VRRM	200	400	600	V
Working Peak Reverse Voltage	VRRM				
DC Blocking Voltage	VR				
Average Rectified Forward Current Total Device, (Rated VR), TC = 150	IF(AV)	8			A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20 kHz), TC = 150	IRM	16			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60	IFSM	100			A
Operating Junction Temperature and Storage Temperature	TJ, Tstg	- 40 to +175			

THERMAL CHARACTERISTICS(Per Diode Leg)

Maximum Thermal Resistance, Junction to Case	R _{JC}	3.0	2.0	MW
--	-----------------	-----	-----	----

ELECTRICAL CHARACTERISTICS(Per Diode Leg)

Maximum Instantaneous Forward Voltage (1) (IF = 8.0 Amps, TC = 25° C)	VF	1.1	1.4	1.6	V
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, TJ = 150° C)	IR	800	800	800	μ A
(Rated dc Voltage, TJ = 25° C)		10	10	10	
Maximum Reverse Recovery Time (IF = 0.5 A, IR = 1.0 A, IREC = 0.25 A)	Trr	35			ns

(1) Pulse Test: Pulse Width = 300μ s, Duty Cycle 2.0%.

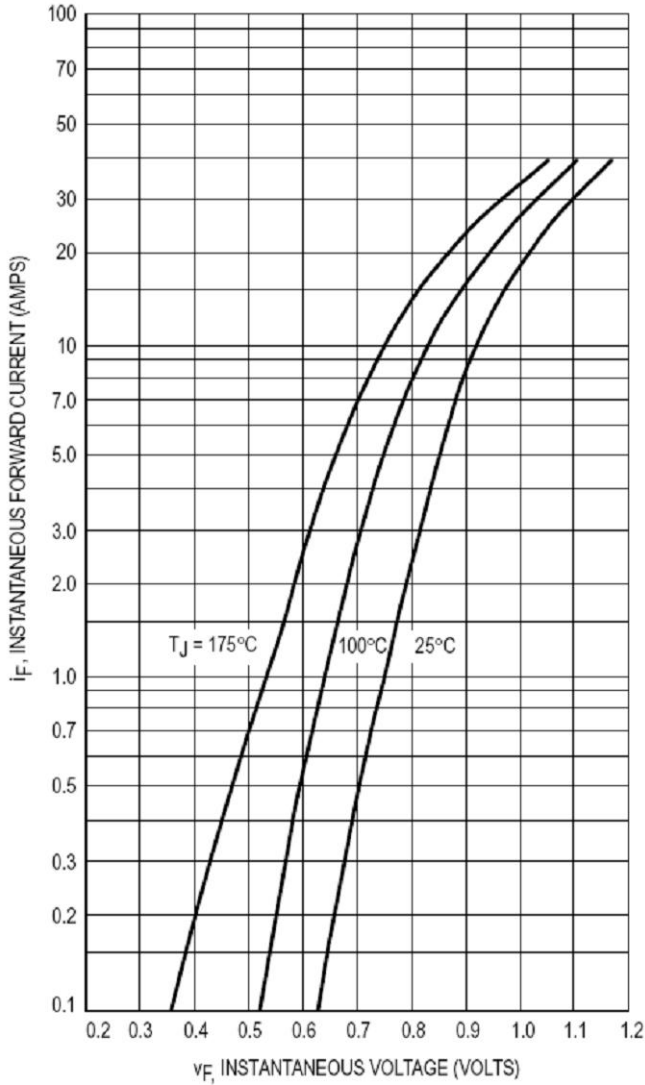


Figure 1. Typical Forward Voltage

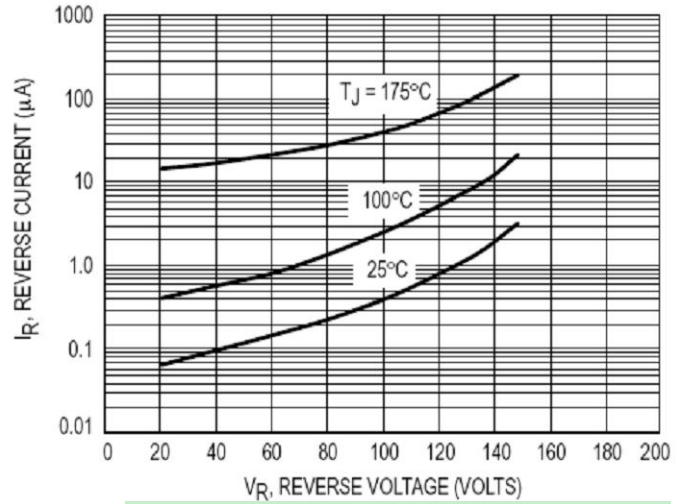


Figure 2. Typical Reverse Current

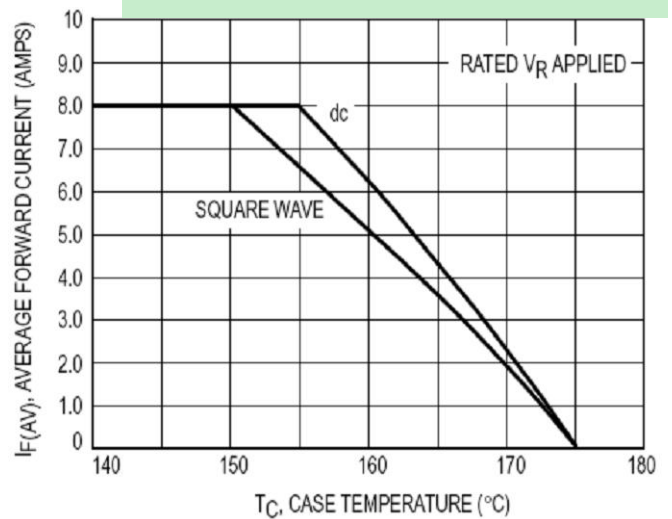


Figure 3. Current Derating, Case

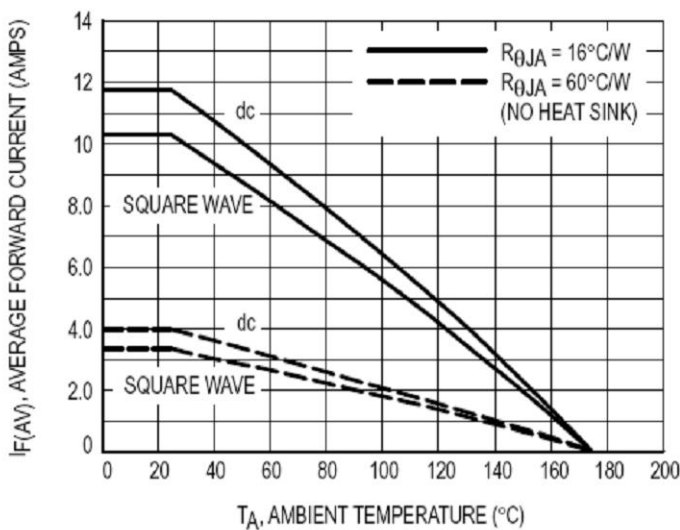


Figure 4. Current Derating, Ambient

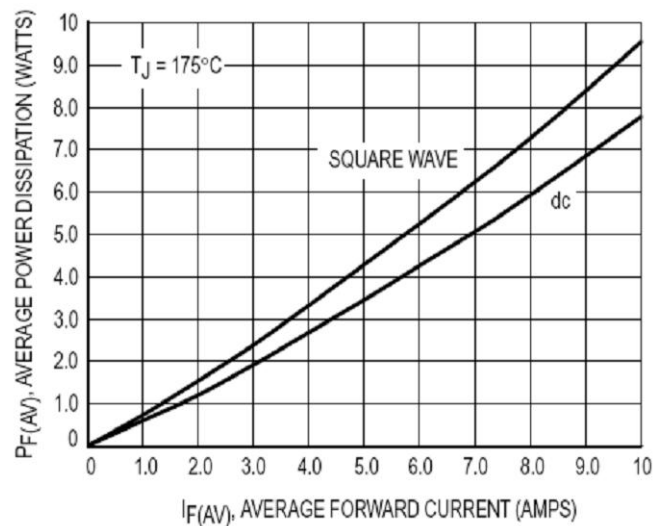


Figure 5. Power Dissipation

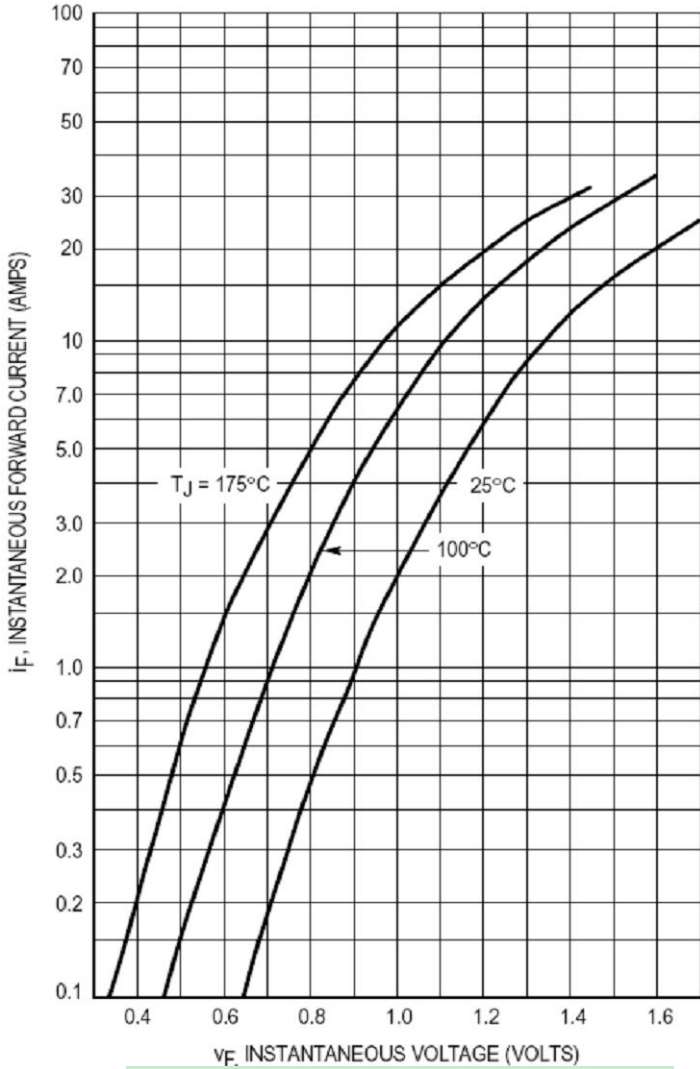


Figure 1. Typical Forward Voltage

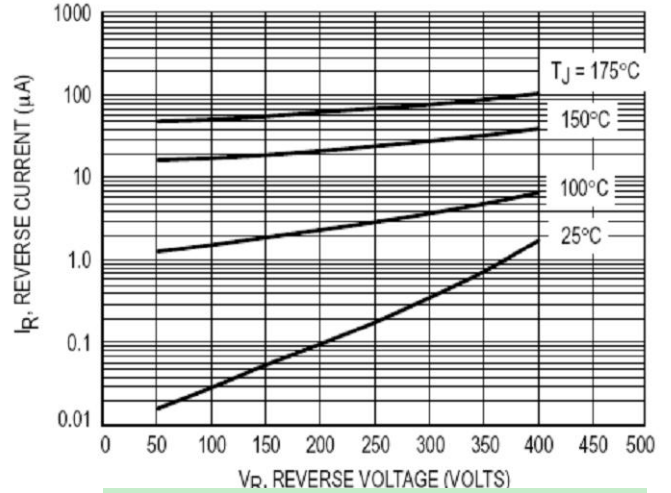


Figure 2. Typical Reverse Current

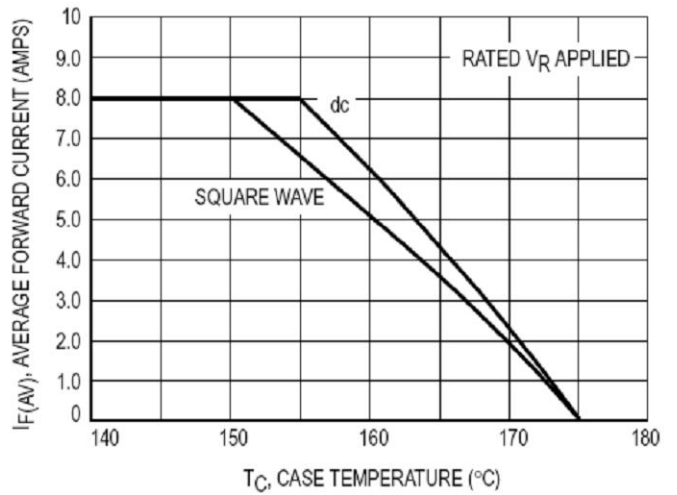


Figure 3. Current Derating, Case

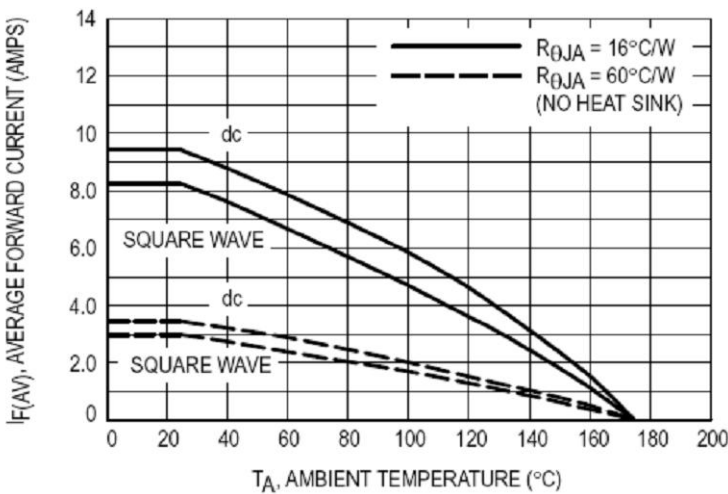


Figure 4. Current Derating, Ambient

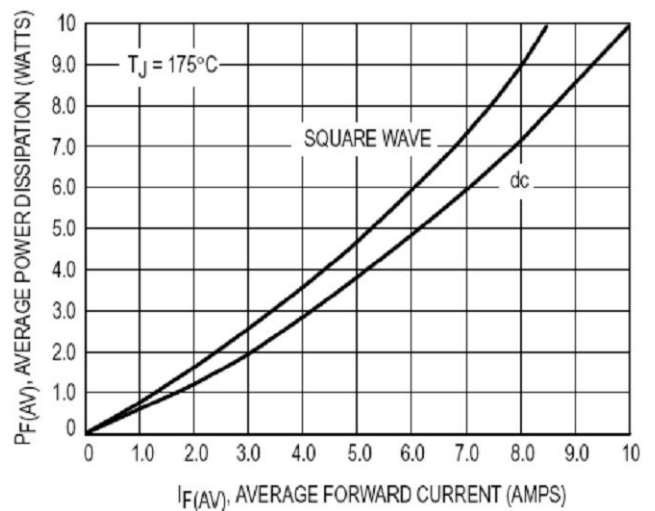


Figure 5. Power Dissipation

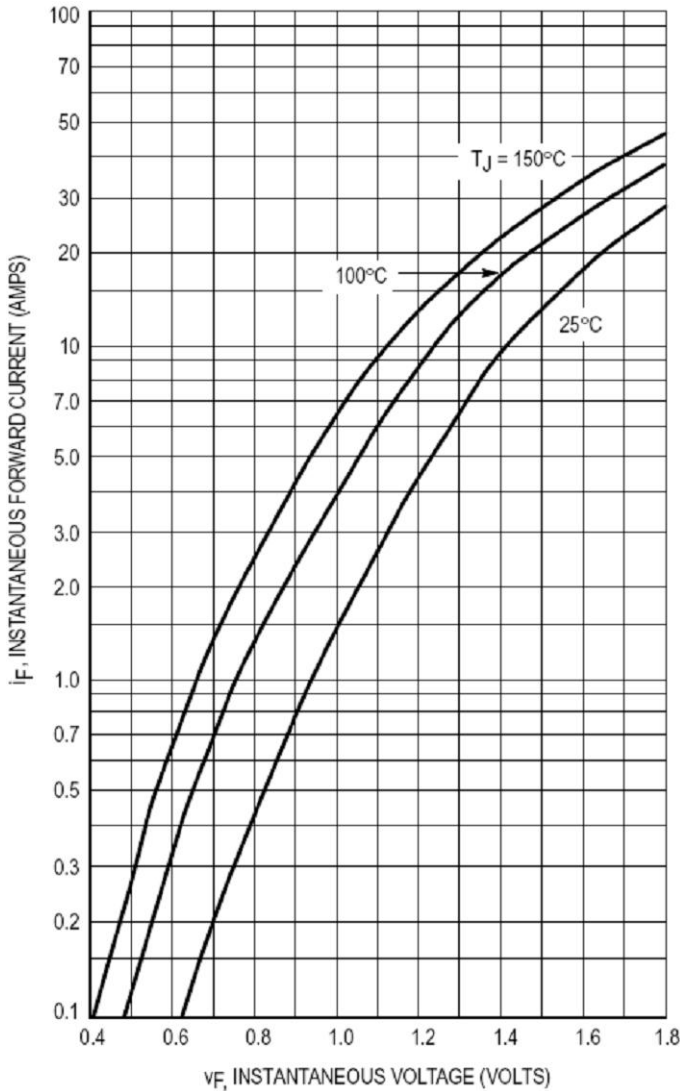


Figure 1. Typical Forward Voltage

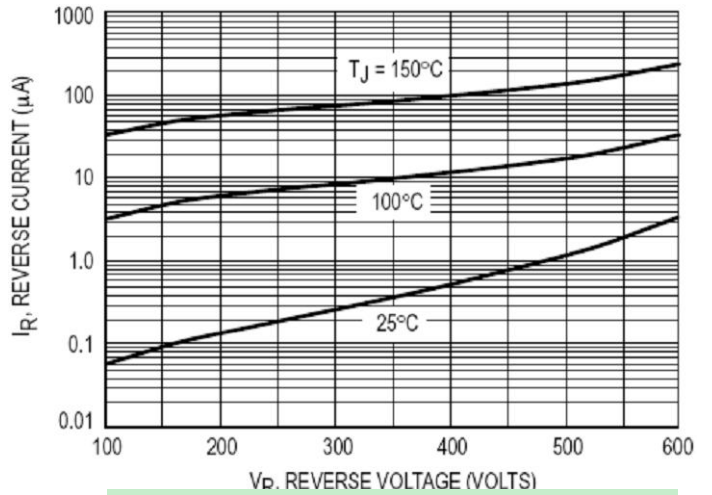


Figure 2. Typical Reverse Current

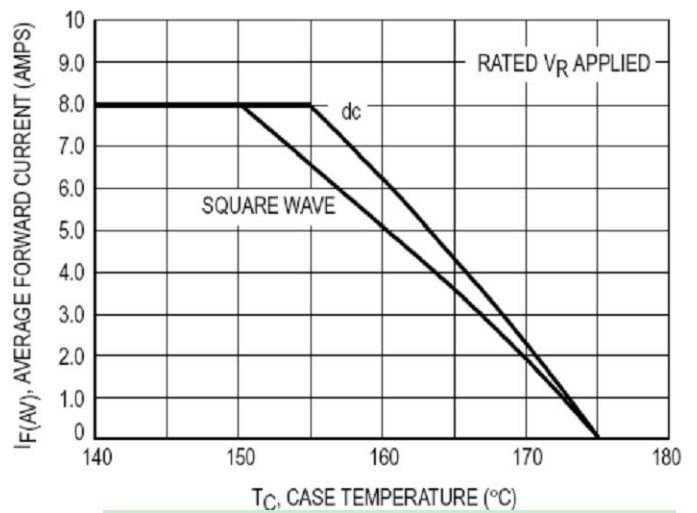


Figure 3. Current Derating, Case

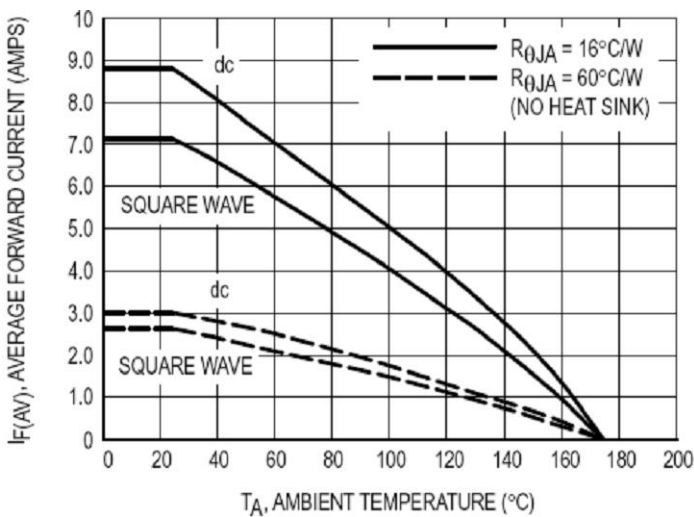


Figure 4. Current Derating, Ambient

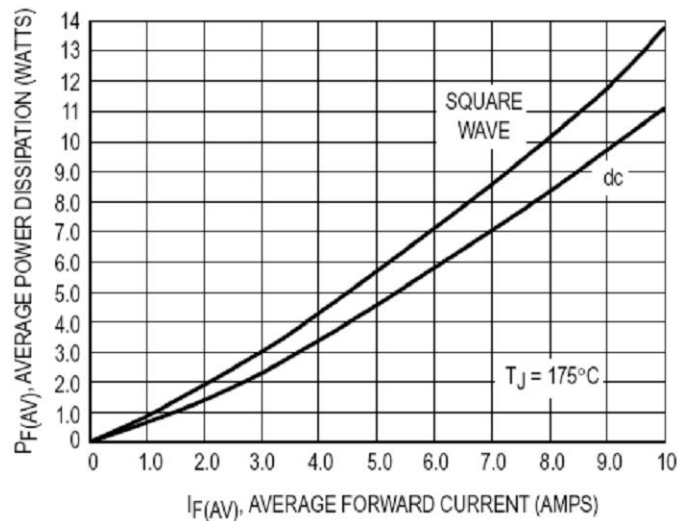


Figure 5. Power Dissipation

