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SF11 Thru SF18

1.0 Amp Super Fast Recovery Rectifiers 50 to 600 Volts

Features

- Fast Switching Speed
- Marking : Type Number
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Temperature: -55℃ to +125℃
- Storage Temperature: -55℃ to +150℃
- Typical Thermal Resistance: 50.0℃/W Junction To Ambient

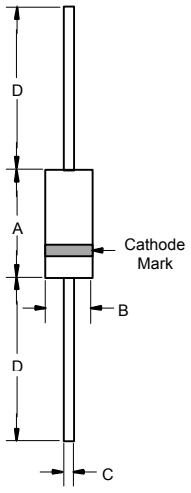
Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF11	50V	35V	50V
SF12	100V	70V	100V
SF13	150V	105V	150V
SF14	200V	140V	200V
SF15	300V	210V	300V
SF16	400V	280V	400V
SF18	600V	420V	600V

Electrical Characteristics @ 25℃ Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A = 55℃
Peak Forward Surge Current	I_{FSM}	30.0A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF11-SF14 SF15-SF16 SF18	V_F	 0.95V 1.30V 1.70V	I_{FM} = 1.0A
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0uA 100uA	T_A = 25℃ T_A = 100℃
Maximum Reverse Recovery Time	T_{RR}	35.0nS	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Typical Junction Capacitance SF11-SF14 SF15-SF18	C_J	 40pF 25pF	Measured at 1.0MHz, V_R=4.0V

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

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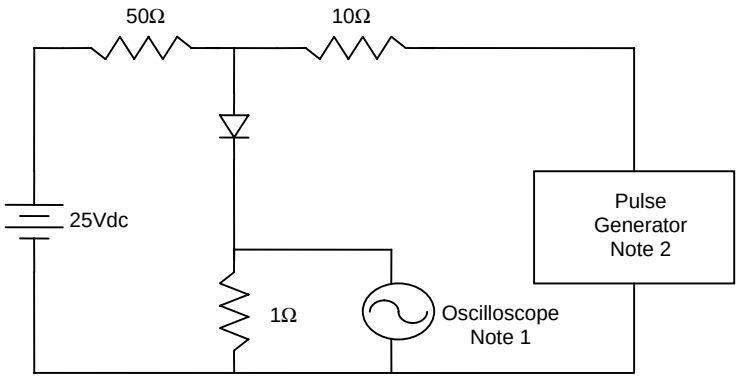
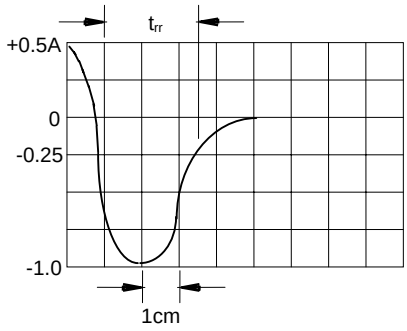
Figure 1
Reverse Recovery Time Characteristic And Test Circuit Diagram

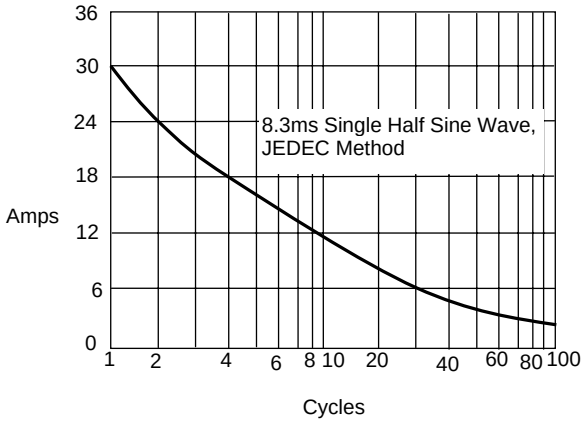




Set Time Base for 10ns/cm

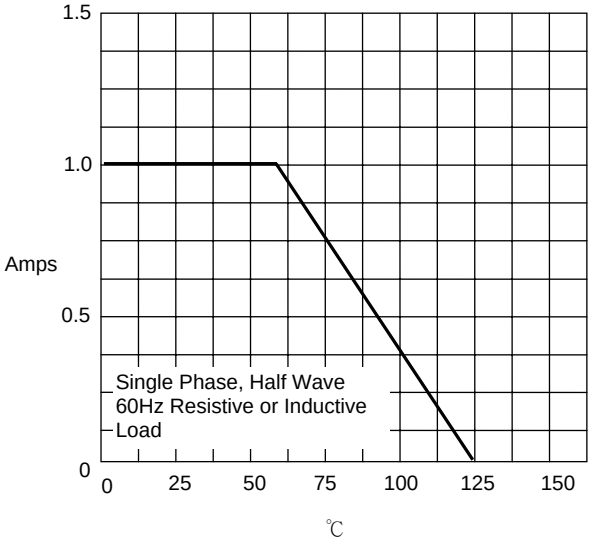
Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Figure 2
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 3
Maximum Average Forward Current Rating



Average Forward Rectified Current Per Leg - Amperes *versus*
Ambient Temperature - ℃

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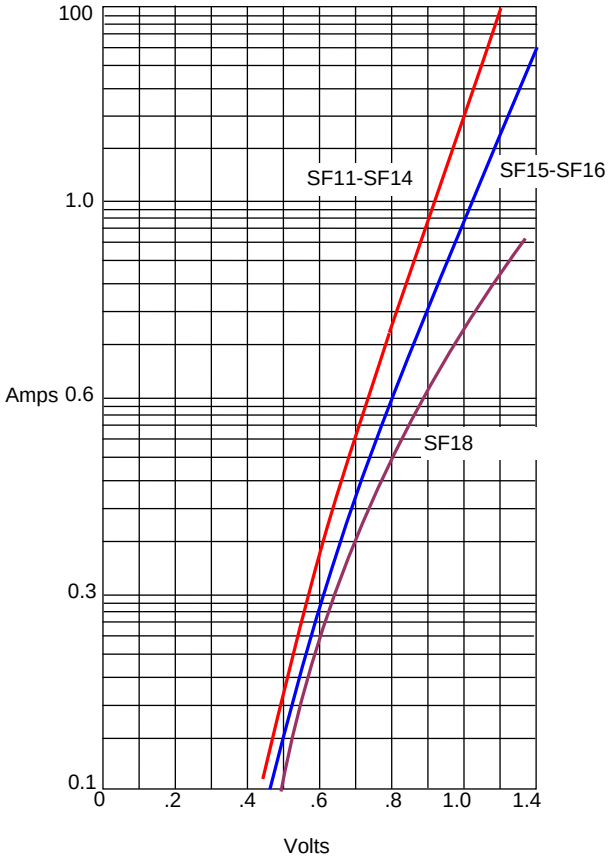
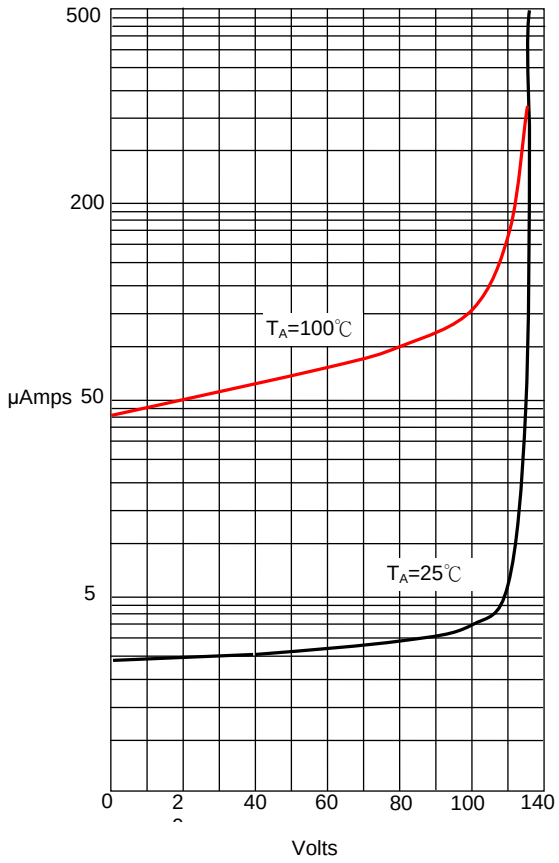
Figure 4
Typical Junction Characteristics



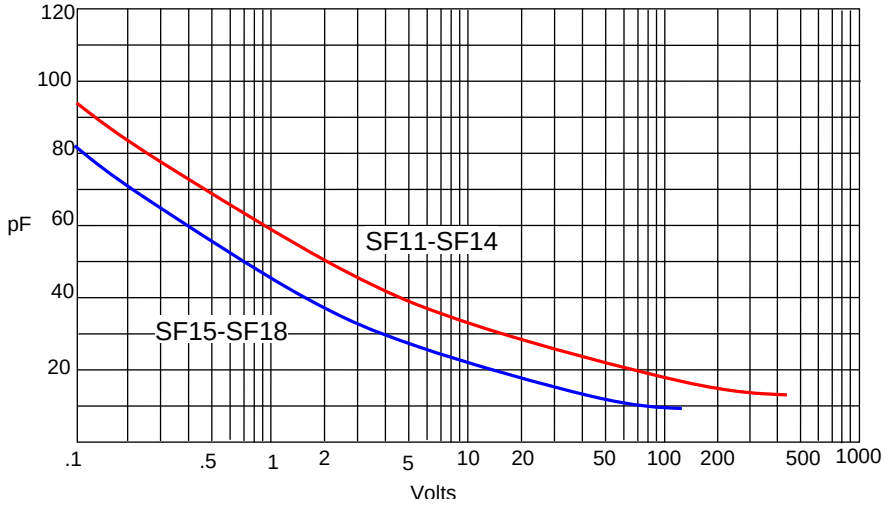
Instantaneous Forward Current -Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 5
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - %Volts

Figure 6
Typical Junction Characteristics



Capacitance - pF
Reverse Voltage - Volts