



Micro Commercial Components

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# SF21 THRU SF28

## 2.0 Amp Super Fast Rectifier 50 to 600 Volts

### Features

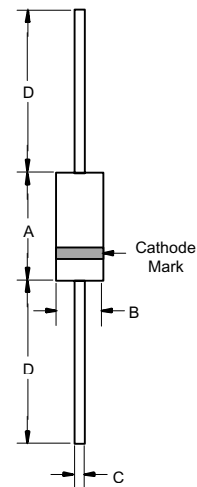
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low forward voltage drop
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number
- Halogen free available upon request by adding suffix "-HF"

### Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- For capacitive load, derate current by 20%

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF21	50V	35V	50V
SF22	100V	70V	100V
SF23	150V	105V	150V
SF24	200V	140V	200V
SF25	300V	210V	300V
SF26	400V	280V	400V
SF28	600V	420V	600V

### DO-15



### Electrical Characteristics @25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.0A	$T_C = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF21-SF24 SF25-SF26 SF28	$V_F$	0.95V 1.30V 1.70V	$I_{FM} = 2.0A$ ; $T_a = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0uA 100uA	$T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$
Typical Junction Capacitance SF21-SF24 SF25-SF28	$C_J$	60pF 30pF	Measured at 1.0MHz, $V_R=4.0V$
Maximum Reverse Recovery Time	$T_{RR}$	35nS	$I_F=0.5A$ , $I_R=1.0A$ , $I_{RR}=0.25A$

\*Pulse Test: Pulse width 300 usec, Duty cycle 1%.

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

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

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FIG.1- TYPICAL REVERSE CHARACTERISTICS

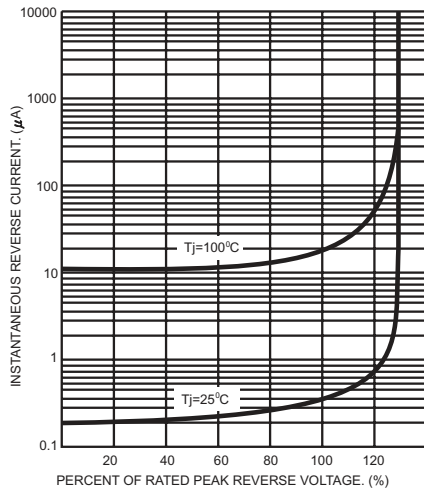


FIG.2- TYPICAL FORWARD CHARACTERISTICS

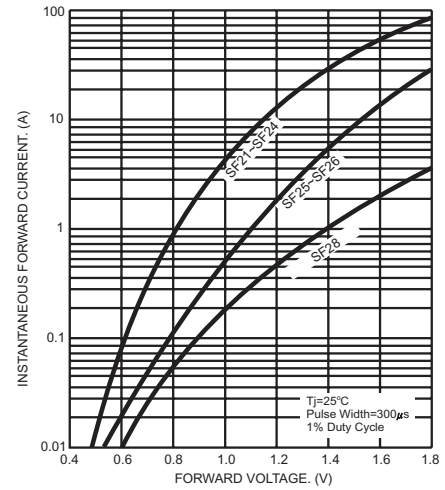
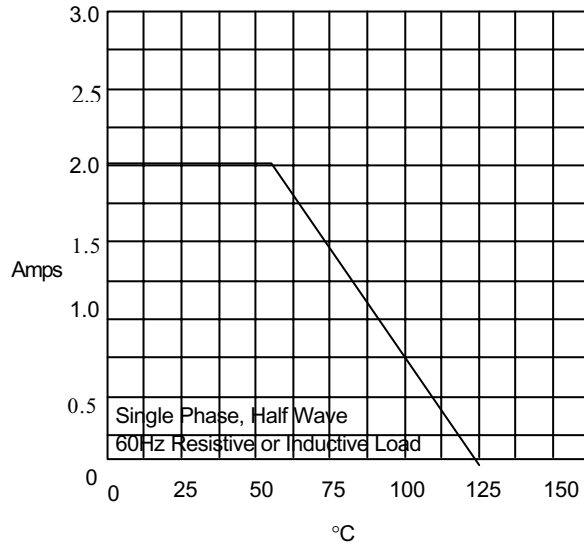


Figure 3  
Forward Derating Curve

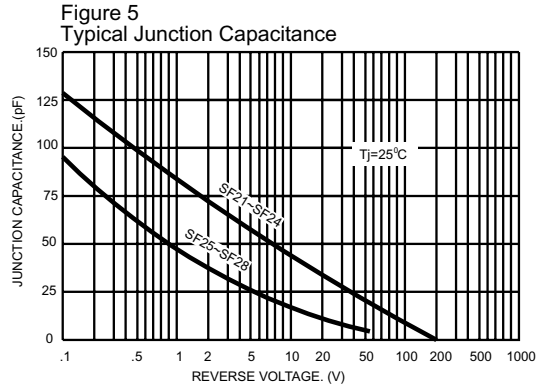
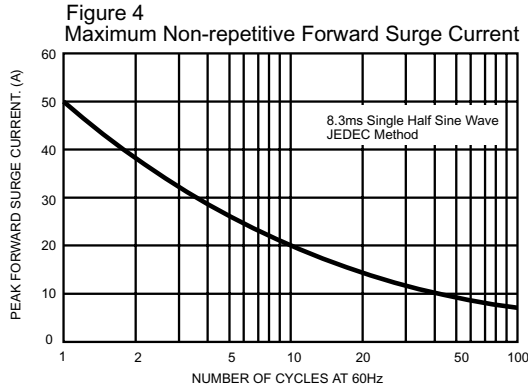


Average Forward Rectified Current Per Leg - Amperes versus Case Temperature - °C

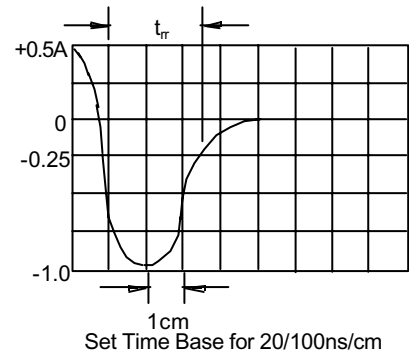
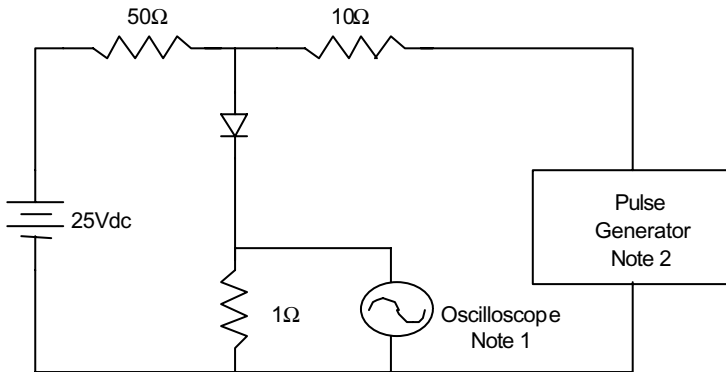
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**Figure 6**  
Reverse Recovery Time Characteristic And Test Circuit Diagram



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

**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel
Part Number-BP	Bulk: 25Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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