



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components

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# SF21G THRU SF28G

## Features

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

## Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- For capacitive load, derate current by 20%
- Typical Thermal Resistance: RthjL: 20°C/W; RthjA: 48°C/W; RthjC: 12°C/W

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| SF21G           | 50V                                    | 35V                 | 50V                         |
| SF22G           | 100V                                   | 70V                 | 100V                        |
| SF23G           | 150V                                   | 105V                | 150V                        |
| SF24G           | 200V                                   | 140V                | 200V                        |
| SF25G           | 300V                                   | 210V                | 300V                        |
| SF26G           | 400V                                   | 280V                | 400V                        |
| SF28G           | 600V                                   | 420V                | 600V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

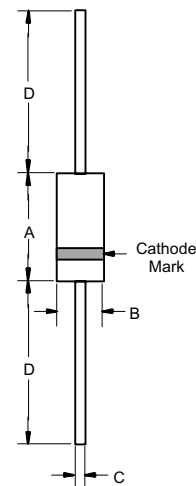
|  |             |                       |   |
|--|-------------|-----------------------|---|
| Average Forward Current  | $I_{F(AV)}$ | 2.0A                  | $T_C = 55^\circ\text{C}$                              |
| Peak Forward Surge Current   | $I_{FSM}$   | 50A                   | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage<br>SF21G-SF24G<br>SF25G-SF26G<br>SF28G | $V_F$       | 0.95V<br>1.3V<br>1.7V | $I_{FM} = 2.0A$ ;<br>$T_a = 25^\circ\text{C}^*$       |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                      | $I_R$       | 5.0μA<br>100μA        | $T_C = 25^\circ\text{C}$<br>$T_C = 125^\circ\text{C}$ |
| Typical Junction Capacitance<br>SF21G-SF24G<br>SF25G-SF28G                   | $C_J$       | 60pF<br>30pF          | Measured at<br>1.0MHz, $V_R=4.0V$                     |
| Maximum Reverse Recovery Time  | $T_{RR}$    | 35nS                  | $I_F=0.5A$ , $I_R=1.0A$ ,<br>$I_{RR}=0.25A$           |

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

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

## 2.0 Amp Super Fast Glass Passivated Rectifier 50 to 600 Volts

DO-15



| 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 | ---  |      |

# SF21G thru SF28G

Figure 1  
Typical Reverse Characteristics

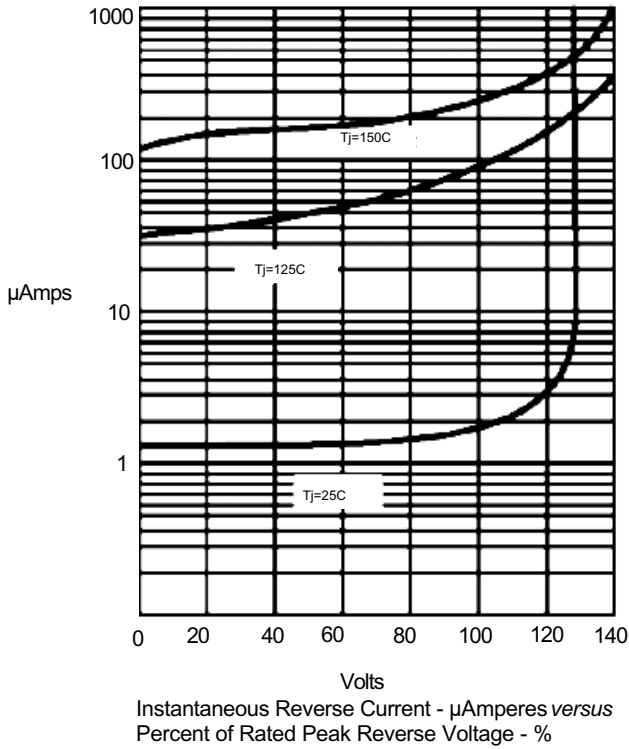
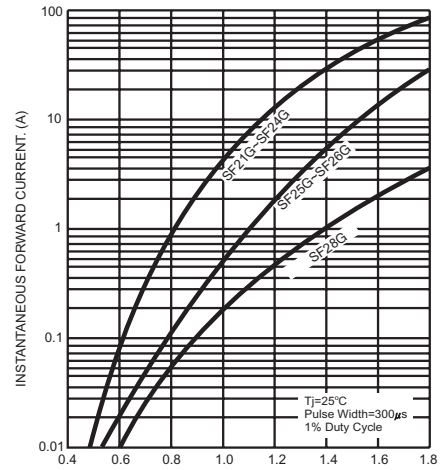
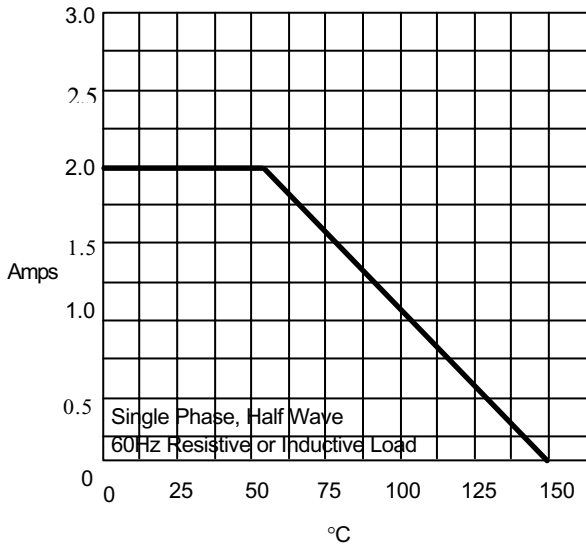


Figure 2  
Typical Forward Characteristics



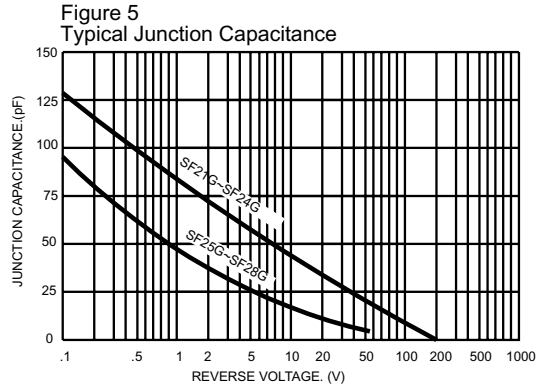
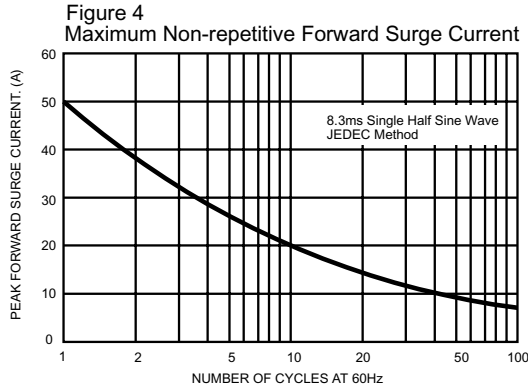
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 3  
Forward Derating Curve

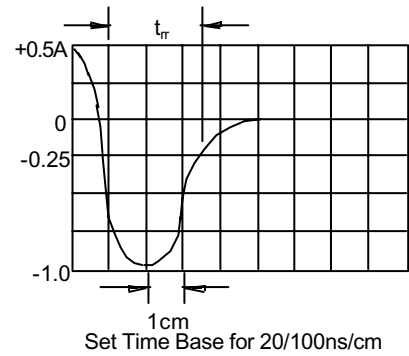
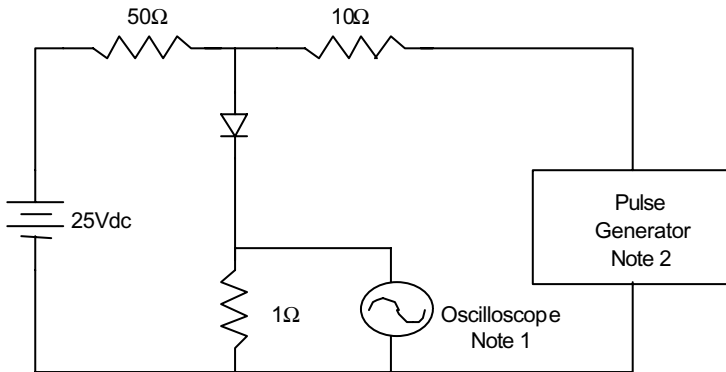


Average Forward Rectified Current Per Leg - Amperes versus  
Case Temperature -  $^\circ\text{C}$

# SF21G thru SF28G



**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



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## 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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