



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



Micro Commercial Components
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**SF11M
THRU
SF18M**

Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- High Surge Capability
- Low Leakage
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Super Fast Switching Speed For High Efficiency
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| SF11M | SF11 | 50V | 35V | 50V |
| SF12M | SF12 | 100V | 70V | 100V |
| SF13M | SF13 | 150V | 105V | 150V |
| SF14M | SF14 | 200V | 140V | 200V |
| SF15M | SF15 | 300V | 210V | 300V |
| SF16M | SF16 | 400V | 280V | 400V |
| SF18M | SF18 | 600V | 420V | 600V |

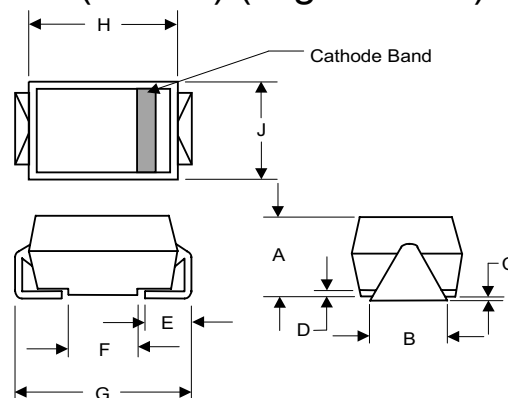
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---------------------------------------------------------------------|-------------|-------------------------------------|-------------------------------------------------------|
| Average Forward Current | $I_{F(AV)}$ | 1 A | $T_A = 55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage SF11M-SF15M SF16M-SF18M | V_F | .975V 1.75V | $I_{FM} = 1.0A$; $T_A = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 50 μA | $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$ |
| Maximum Reverse Recovery Time SF11M-SF15M SF16M-SF18M | T_{rr} | 35ns 50ns | $I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$ |
| Typical Junction Capacitance SF11M-SF15M SF16M-SF18M | C_J | 15pF 10pF | Measured at 1.0MHz, $V_R=4.0V$ |

*Pulse Test: Pulse Width 300 μsec , Duty Cycle 1%
Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

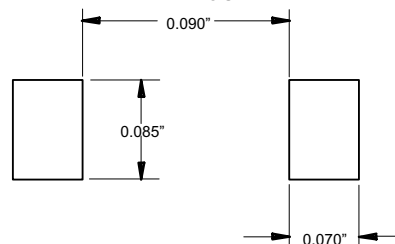
**1 Amp Glass
Passivated Super Fast
Recovery Rectifier
50 to 600 Volts**

**DO-214AC
(HSMA) (High Profile)**



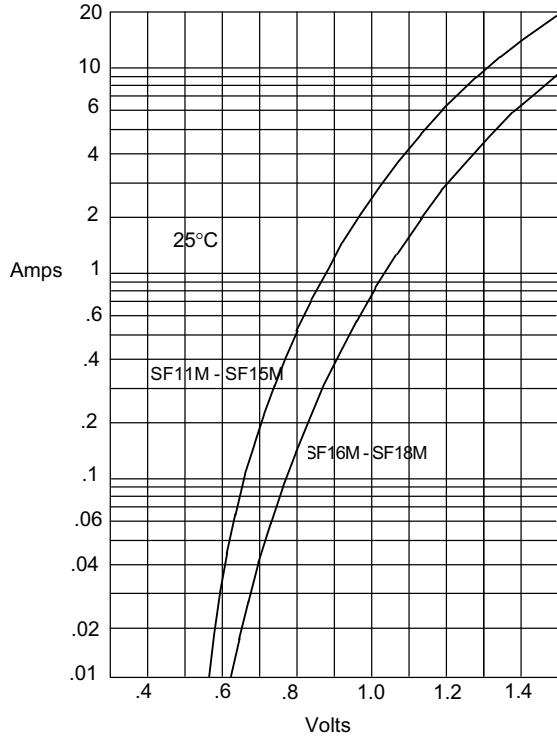
| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INCHES | | MM | | |
| A | .078 | .116 | 1.98 | 2.95 | |
| B | .067 | .089 | 1.70 | 2.25 | |
| C | .002 | .008 | .05 | .20 | |
| D | — | .02 | — | .51 | |
| E | .035 | .055 | .89 | 1.40 | |
| F | .065 | .096 | 1.65 | 2.45 | |
| G | .205 | .224 | 5.21 | 5.69 | |
| H | .160 | .180 | 4.06 | 4.57 | |
| J | .100 | .112 | 2.57 | 2.84 | |

**SUGGESTED SOLDER
PAD LAYOUT**



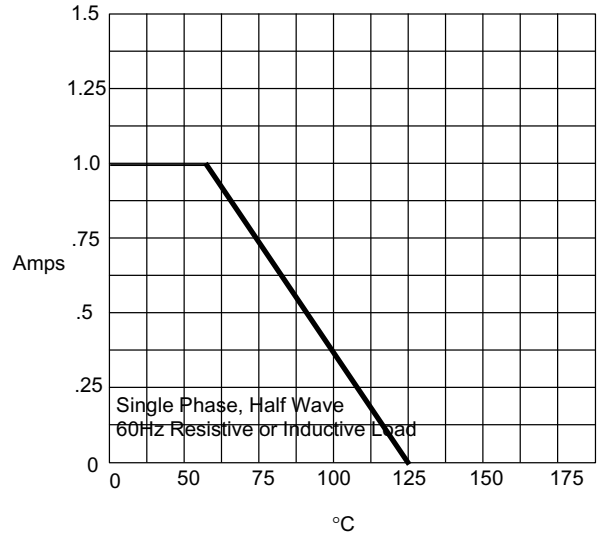
SF11M thru SF18M

Figure 1
Typical Forward Characteristics



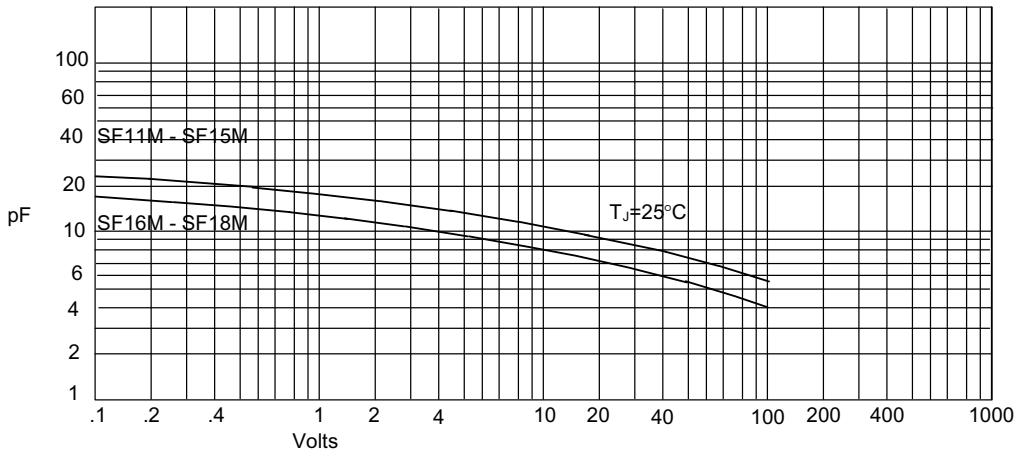
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

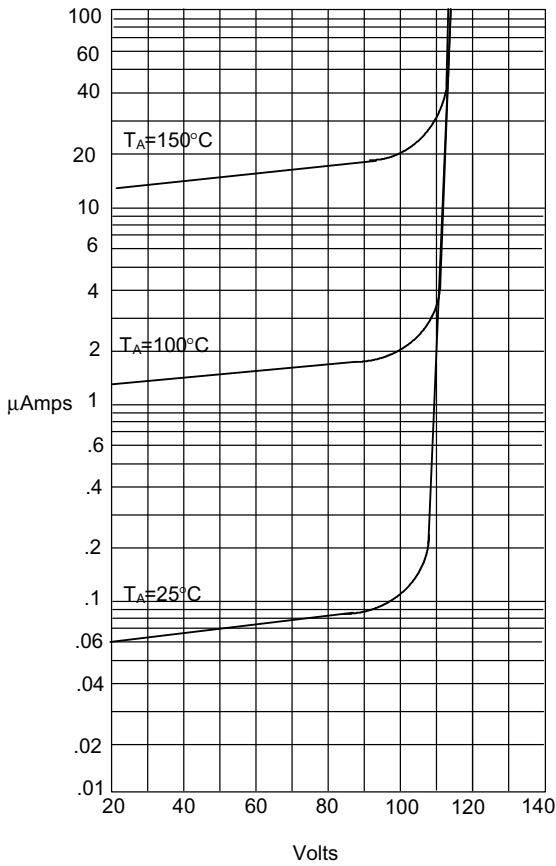
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

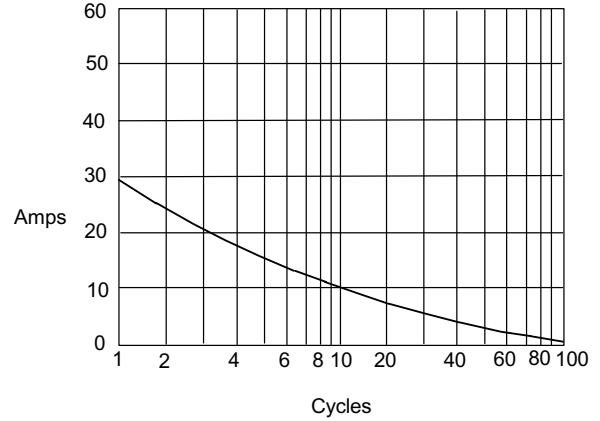
SF11M thru SF18M

Figure 4
Typical Reverse Characteristics



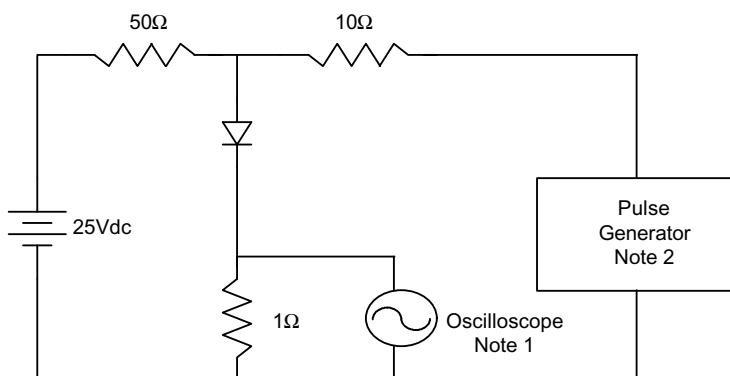
Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

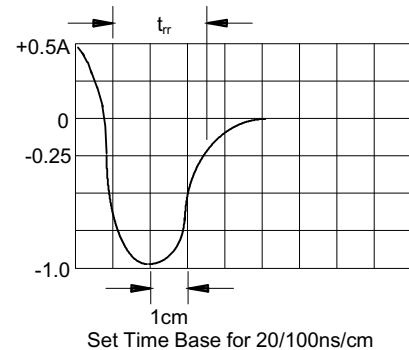


Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

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





Micro Commercial Components

Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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

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