

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Super Fast Recovery Time
- Glass Passivated Chip Junction
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)

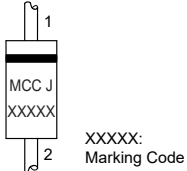

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		SF 11G	SF 12G	SF 13G	SF 14G	SF 15G	SF 16G	SF 18G	
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	200	300	400	600	
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Average Rectified Forward Current @ See Fig. 1	$I_{F(AV)}$	1							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	30							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		60							
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	$I^2t$	3.735							A <sup>2</sup> s

## Marking code

Part Number	Marking code
SF11G	SF11G
SF12G	SF12G
SF13G	SF13G
SF14G	SF14G
SF15G	SF15G
SF16G	SF16G
SF18G	SF18G

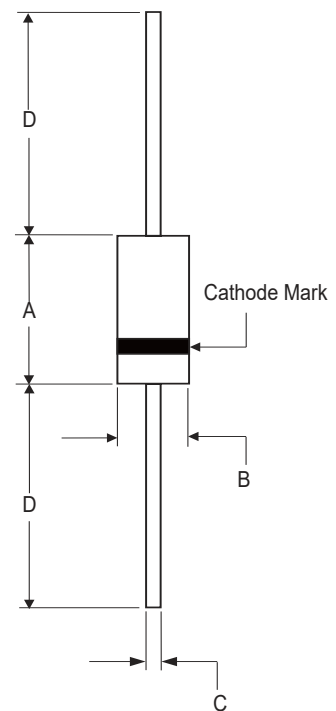
## Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	Cathode	 <p>XXXXX: Marking Code</p>	
2	Anode		

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

# 1 Amp Super Fast Recovery Rectifier 50 to 600 Volts

## DO-41



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.160	0.205	4.10	5.20	
B	0.080	0.107	2.00	2.70	Φ
C	0.028	0.035	0.71	0.90	Φ
D	1.000	-----	25.40	-----	

### Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead			20		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient			80		°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SF11G~SF14G SF15G~SF16G SF18G	$V_F$	$I_F=1A; T_J=25^\circ C$			0.95 1.30 1.70	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 100	$\mu A$
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A; I_R=1.0A;$ $I_{rr}=0.25A; T_J=25^\circ C$			35	ns
Junction Capacitance SF11G~SF14G SF15G~SF16G SF18G	$C_J$	$V_R=4V; f=1MHz; T_J=25^\circ C$		20 12 8		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

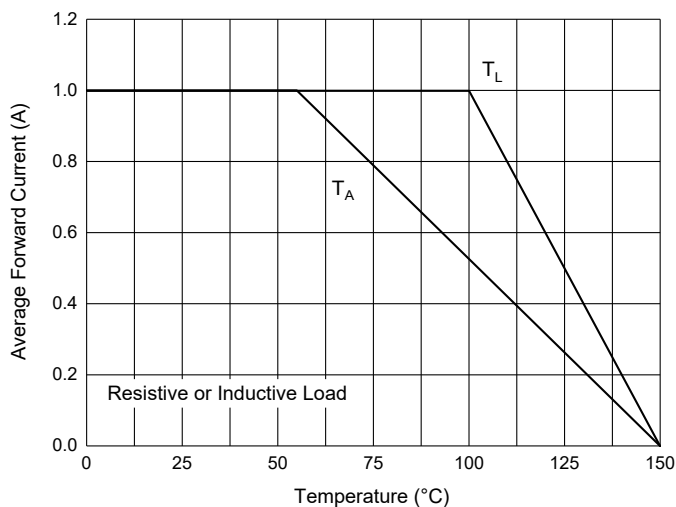


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

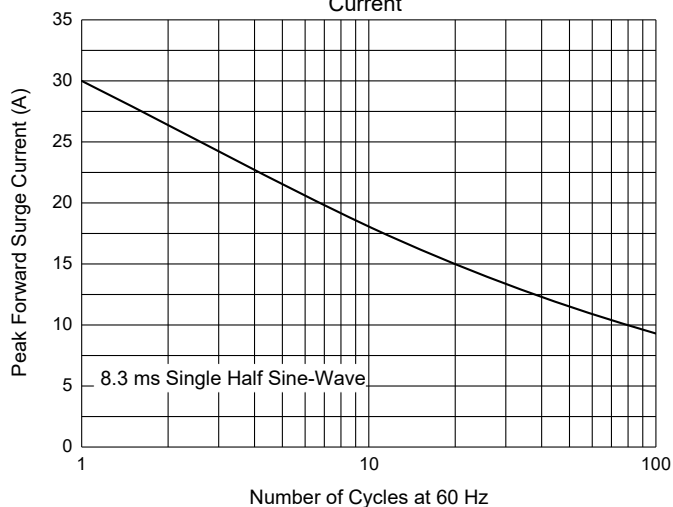


Fig. 3 - Typical Forward Characteristics

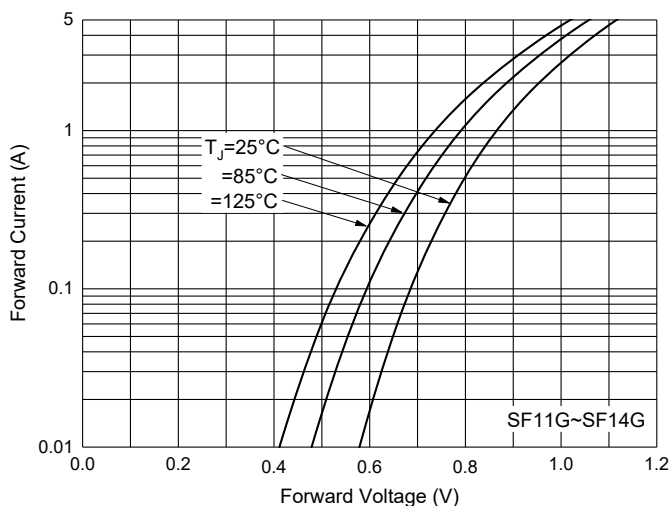


Fig. 4 - Typical Forward Characteristics

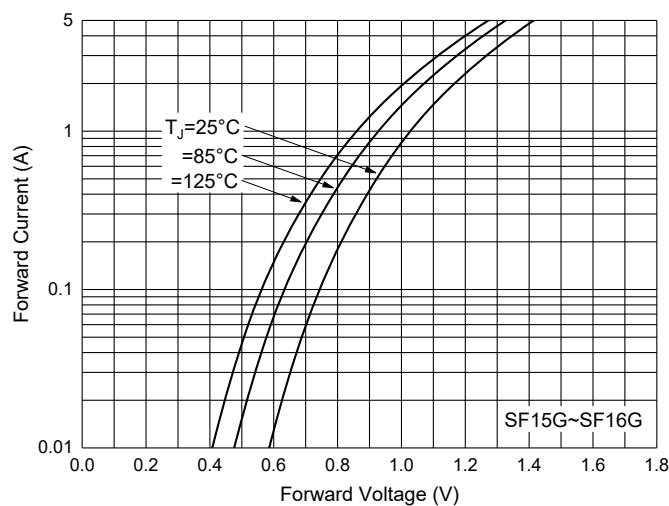


Fig. 5 - Typical Forward Characteristics

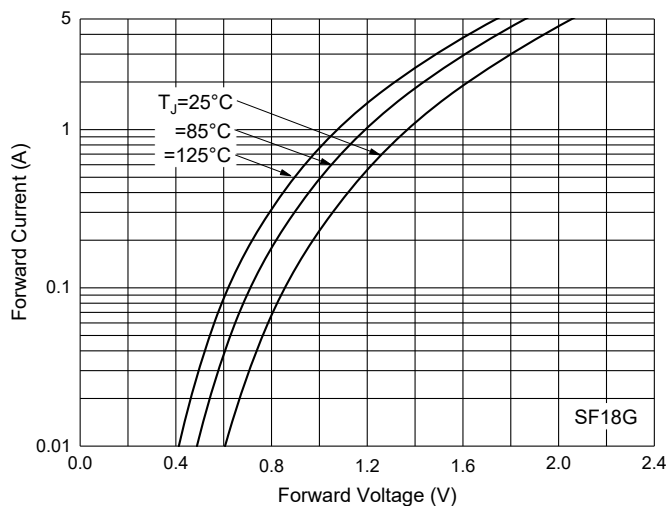
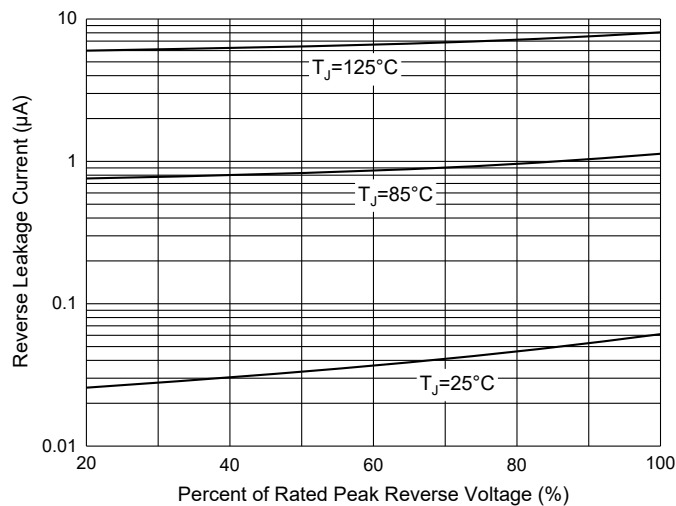
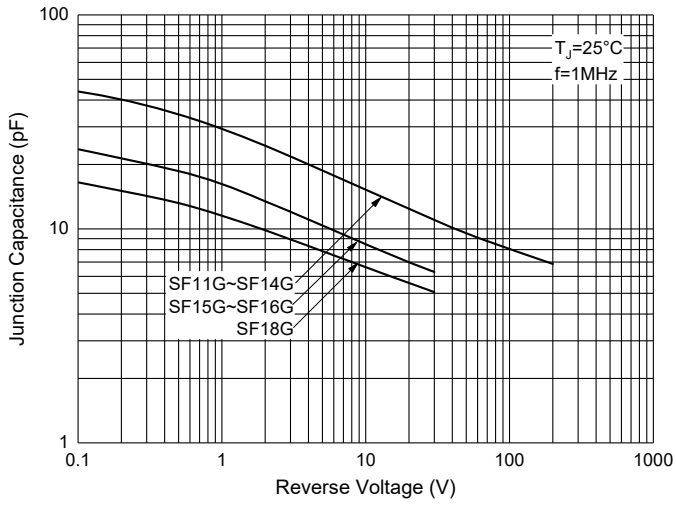


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk:1Kpcs/Box,50Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp** . and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp.** products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Micro Commercial Components \(MCC\):](#)

[SF16G-TP](#) [SF14G-TP](#) [SF18G-TP](#) [SF14G-AP](#) [SF14G-BP](#) [SF18G-AP](#) [SF18G-BP](#) [SF16G-BP](#) [SF16G-AP](#) [SF18G-AP-HF](#)