Micro Commercial Components

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SF11M THRU SF18M

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

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

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

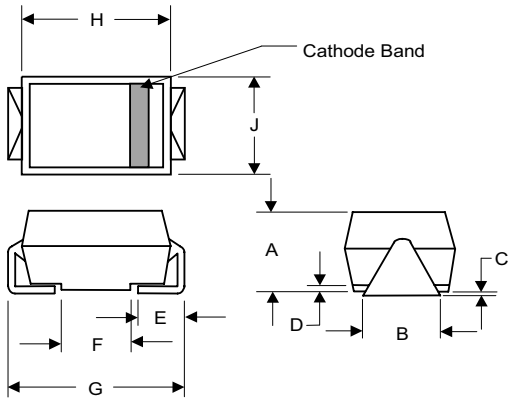
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	T_A = 55°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°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 50µA	T_A = 25°C T_A = 150°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 300µsec, Duty Cycle 1%

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

DO-214AC
(HSMA) (High Profile)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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

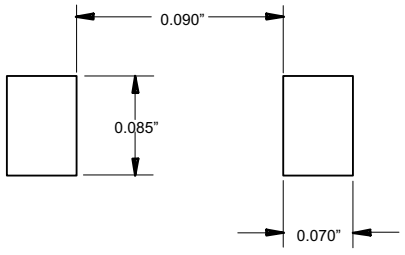
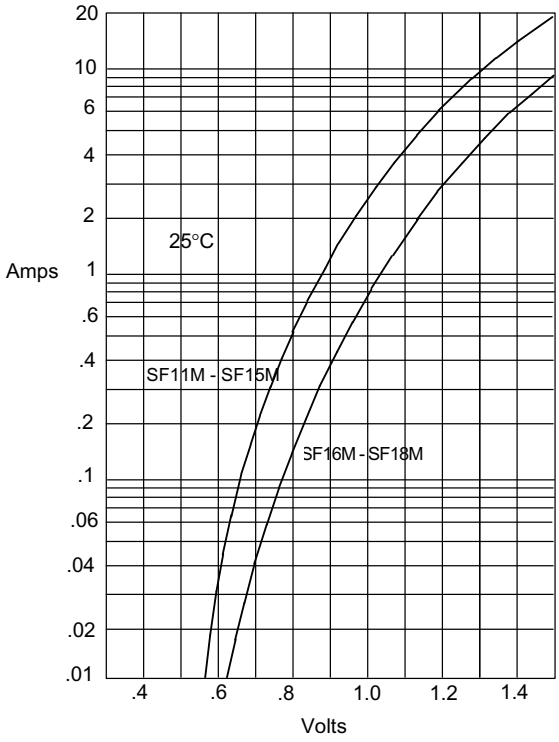
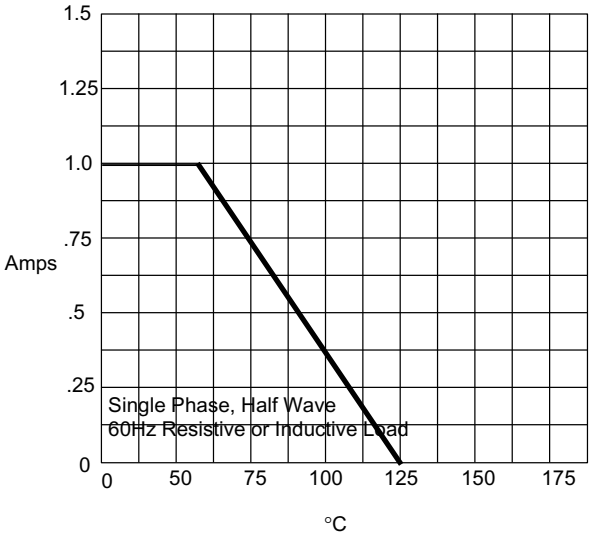


Figure 1
Typical Forward Characteristics



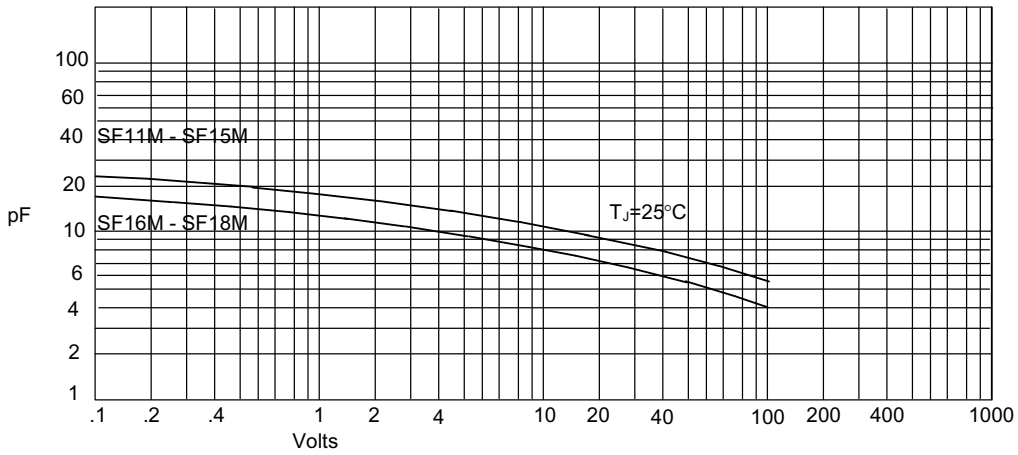
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



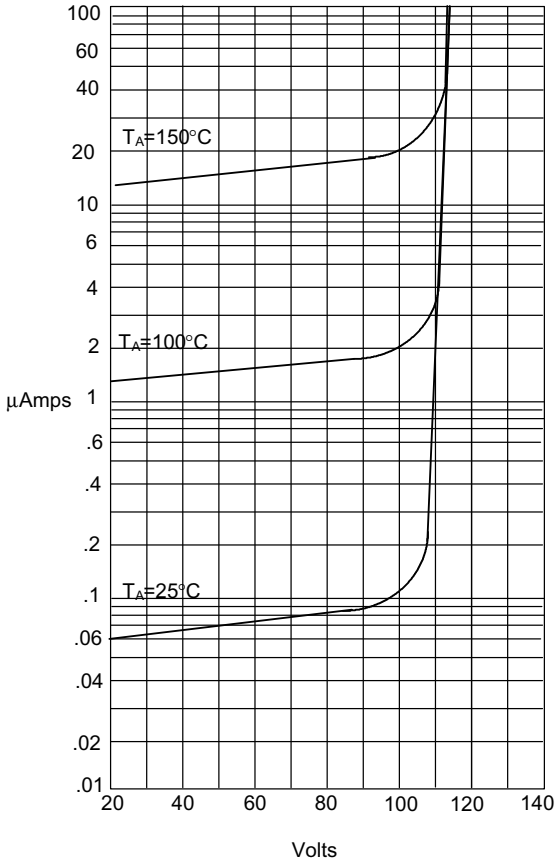
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



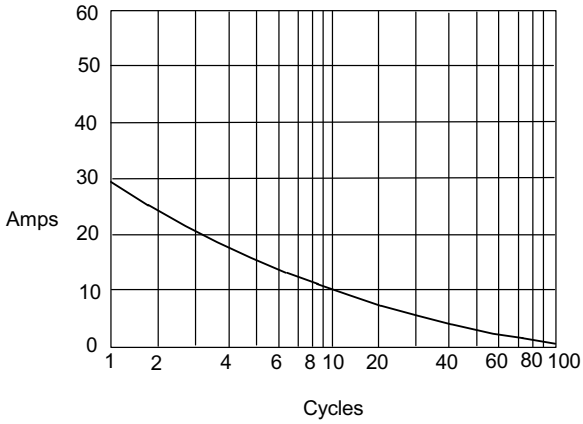
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



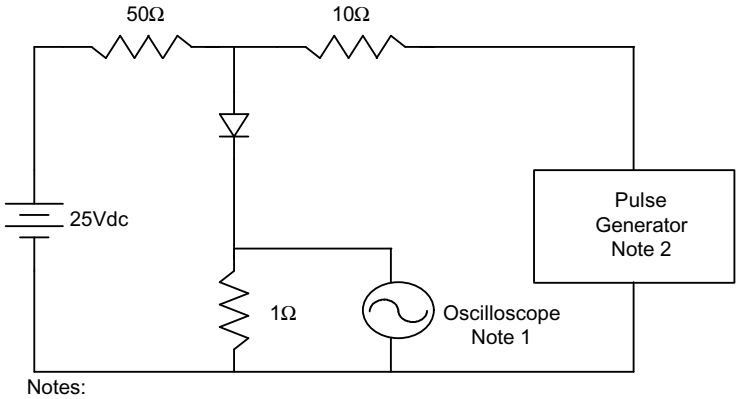
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

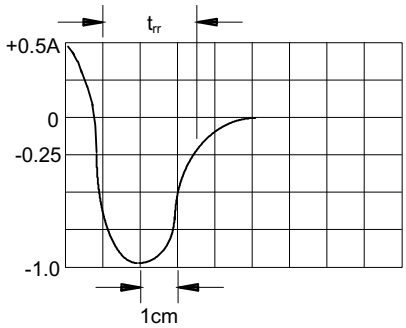
Figure 5
Peak Forward Surge Current



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

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/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

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Ordering Information :

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

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