

**NOT RECOMMENDED FOR NEW DESIGNS
USE FS1A-LTP~FS1M-LTP SERIES**



Micro Commercial Components



Micro Commercial Components
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**FS1A
THRU
FS1M**

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency
- Halogen free available upon request by adding suffix "-HF"

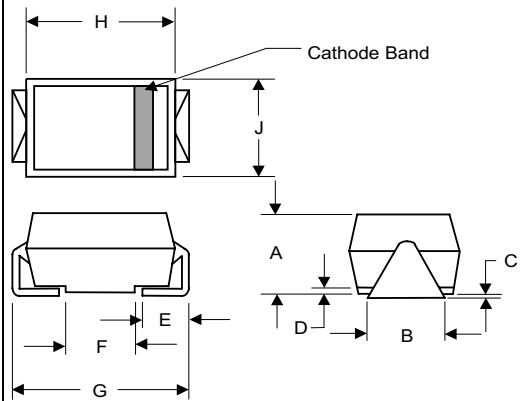
Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead
- Maximum Thermal Resistance; 88°C/W Junction To Ambient

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FS1A	FS1A	50V	35V	50V
FS1B	FS1B	100V	70V	100V
FS1D	FS1D	200V	140V	200V
FS1G	FS1G	400V	280V	400V
FS1J	FS1J	600V	420V	600V
FS1K	FS1K	800V	560V	800V
FS1M	FS1M	1000V	700V	1000V

**1 Amp Fast Recovery
Silicon Rectifier
50 to 1000 Volts**

**DO-214AC
(HSMA)**

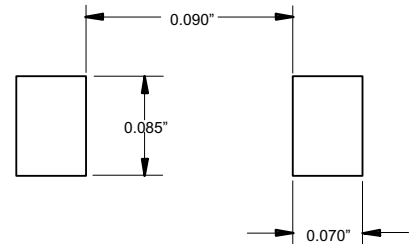


Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	$T_a = 90^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.30V	$I_{FM} = 1.0A;$ $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 200µA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Maximum Reverse Recovery Time	T_{rr}	150ns 250ns 500ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance	C_J	50pF	Measured at 1.0MHz, $V_R=4.0V$

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**



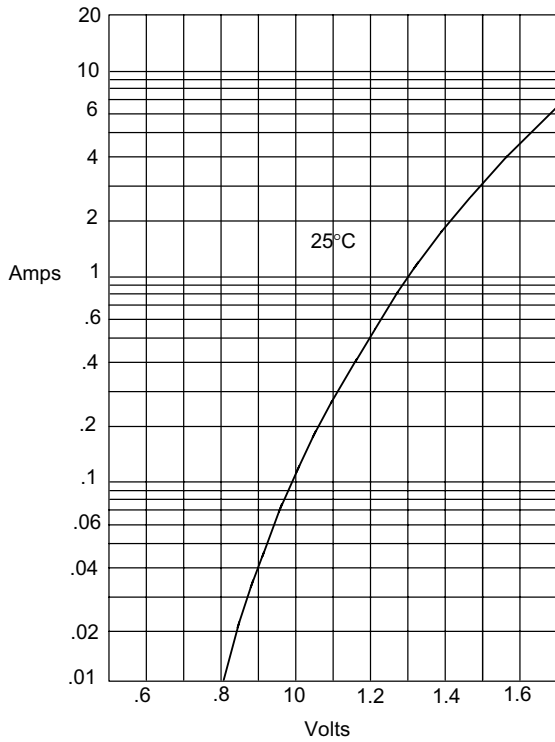
*Pulse test: Pulse width 200 µsec, Duty cycle 2%

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

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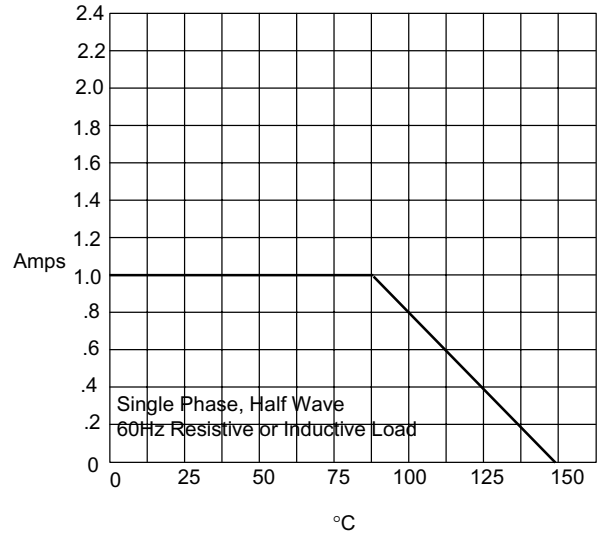
FS1A thru FS1M

Figure 1
Typical Forward Characteristics



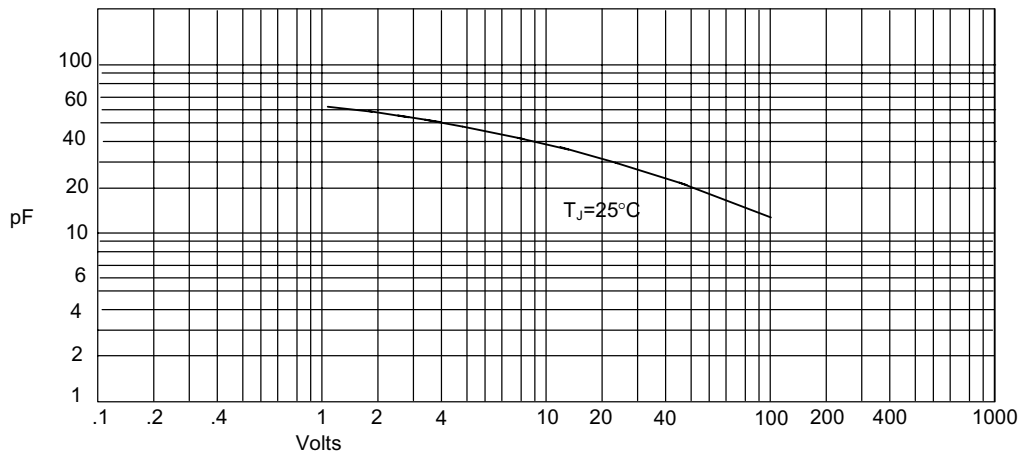
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



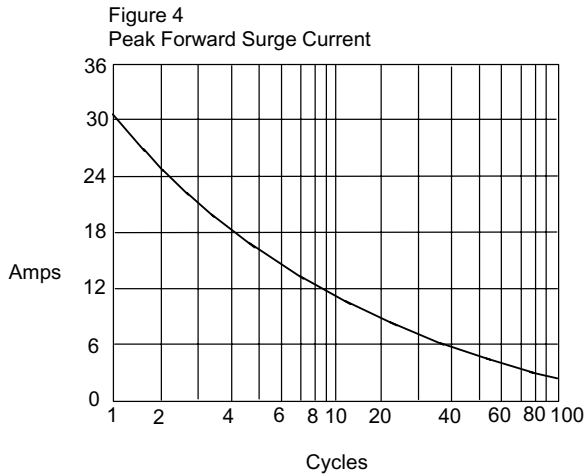
Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF versus
Reverse Voltage - Volts

FS1A thru FS1M



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

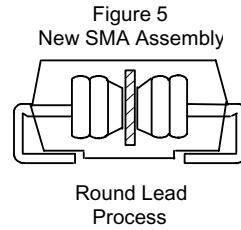
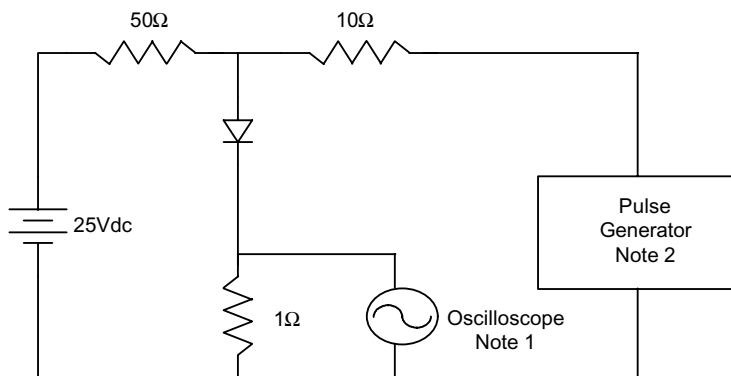


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



- 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

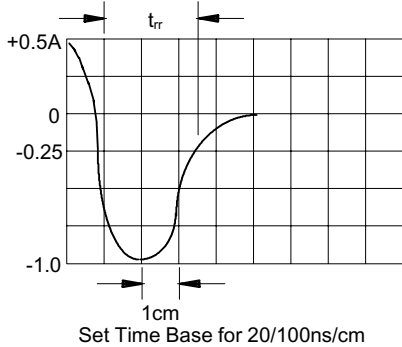
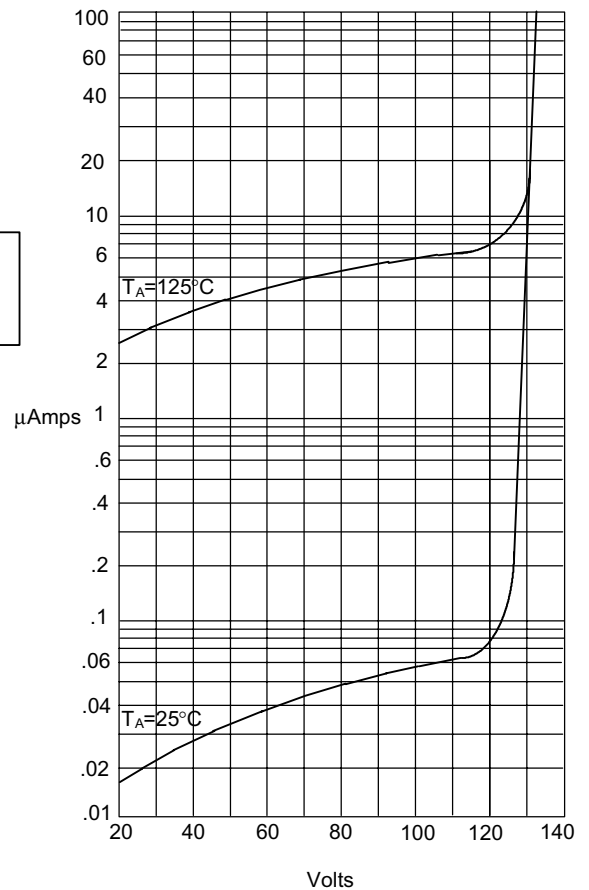


Figure 7
Typical Reverse Characteristics



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



TM

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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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