Micro Commercial Components

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FS1A THRU FS1M

1 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating1
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

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

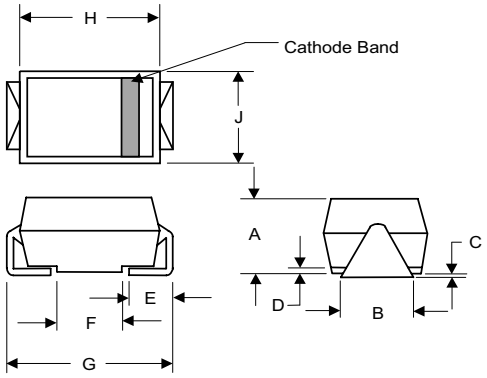
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	T_a = 90°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°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 200μA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time FS1A-G FS1J FS1K-M	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

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

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

DO-214AC
(HSMA)



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

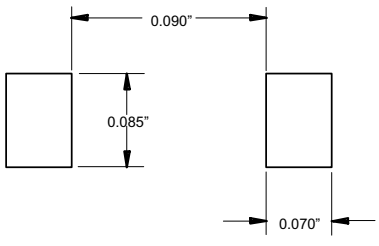


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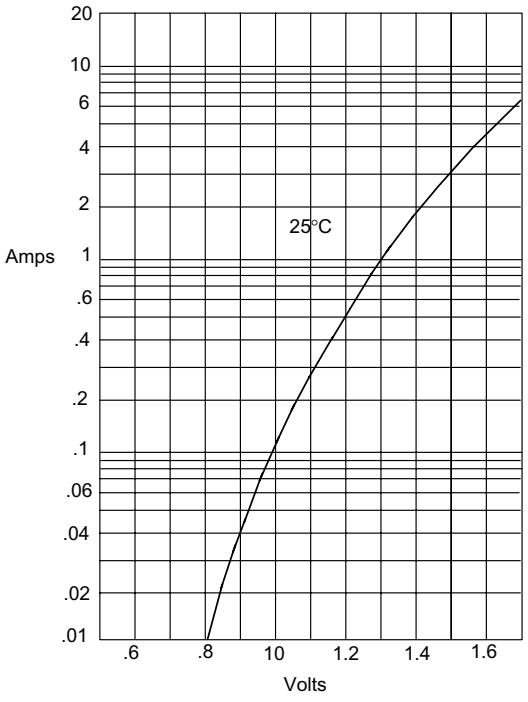
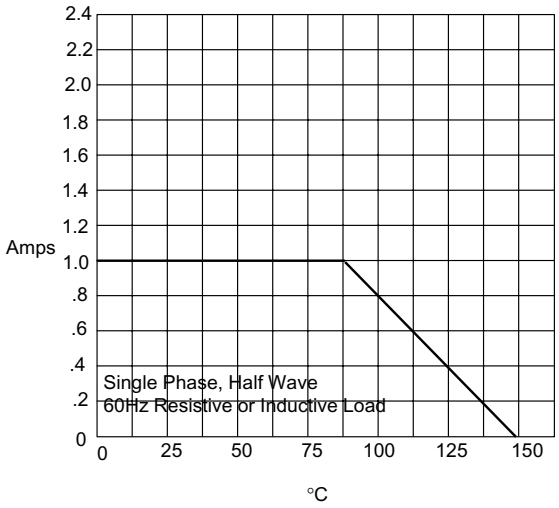
Figure 1
Typical Forward Characteristics



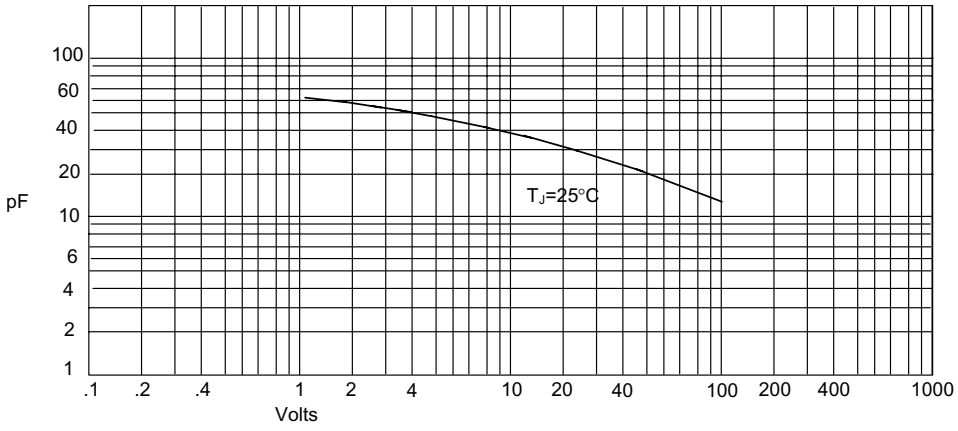
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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

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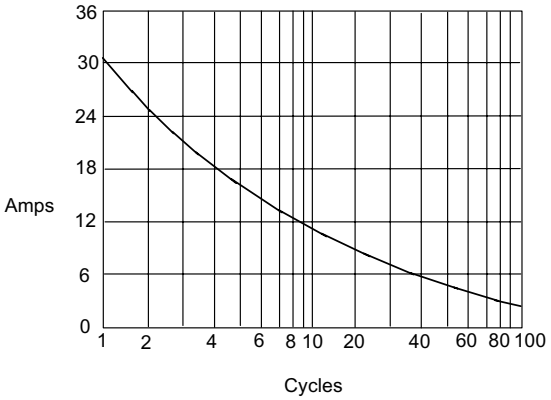
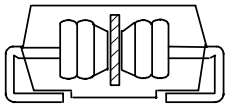
Figure 4
Peak Forward Surge Current



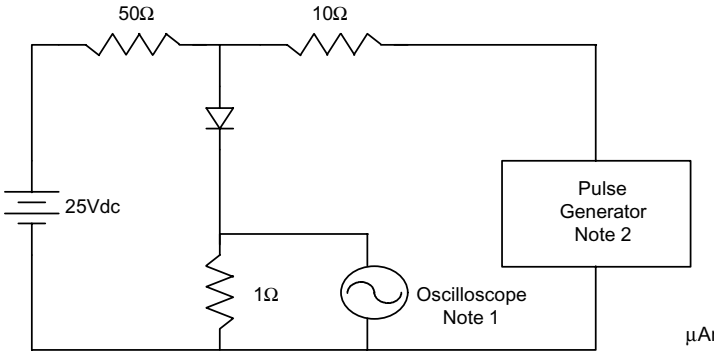
Peak Forward Surge Current - Amperes*versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
New SMA Assembly

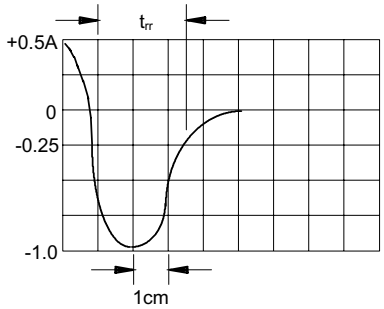


Round Lead
Process

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram

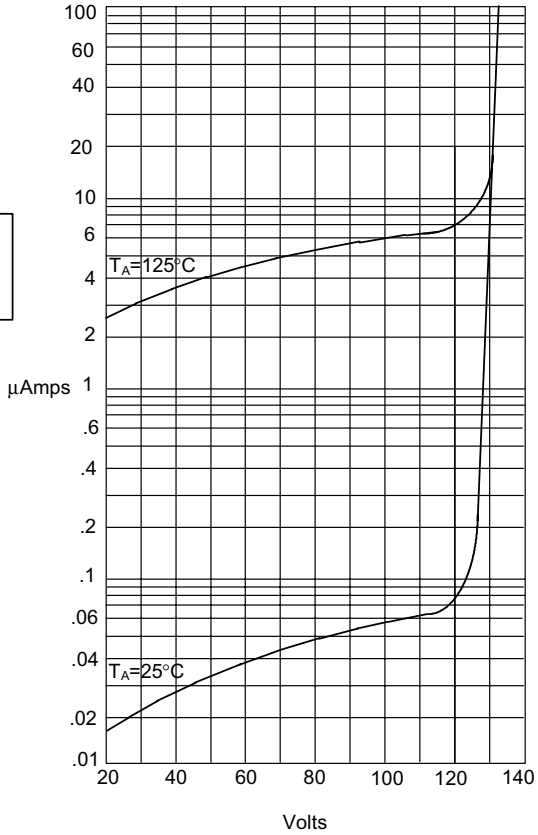


Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive



Set Time Base for 20/100ns/cm

Figure 7
Typical Reverse Characteristics



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

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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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