

S2A THRU S2M

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals

2 Amp Silicon Rectifier 50 to 1000 Volts

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

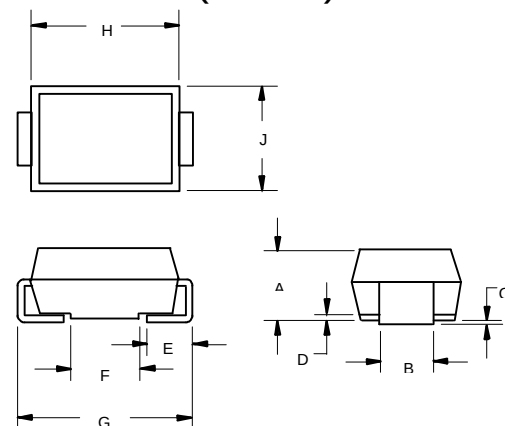
Microsemi Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S2A	S2A	50V	35V	50V
S2B	S2B	100V	70V	100V
S2D	S2D	200V	140V	200V
S2G	S2G	400V	280V	400V
S2J	S2J	600V	420V	600V
S2K	S2K	800V	560V	800V
S2M	S2M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	2.0A	$T_J = 75^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, half sine, $T_J = 150^\circ\text{C}$
Maximum Instantaneous Forward Voltage	V_F	1.15V	$I_{FM} = 1.0\text{A}; T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 50μA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Maximum Reverse Recovery Time	T_{rr}	2.0μs	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

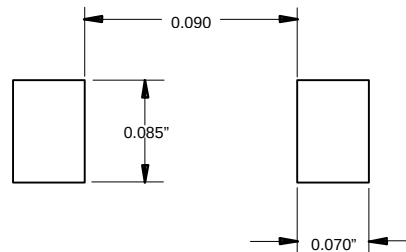
DO-214AA (SMBJ)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	—	.02	—	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

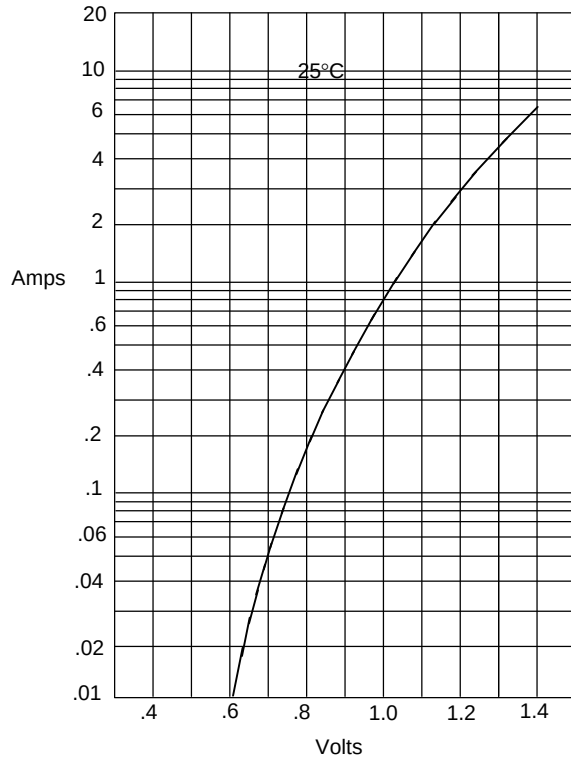
1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT



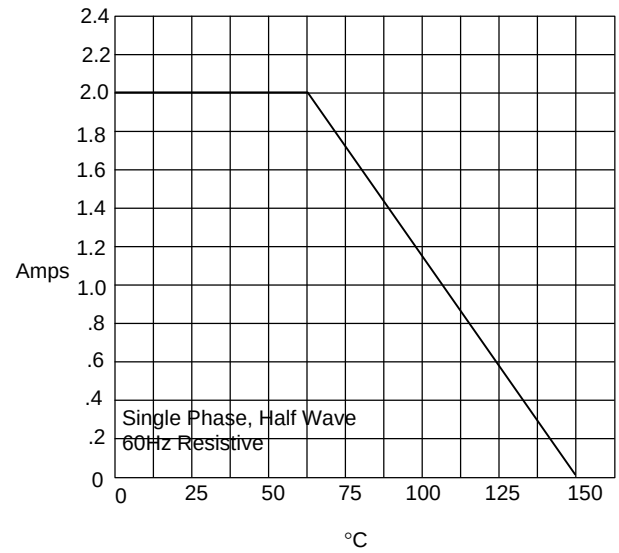
S2A thru S2M

Figure 1
Typical Forward Characteristics



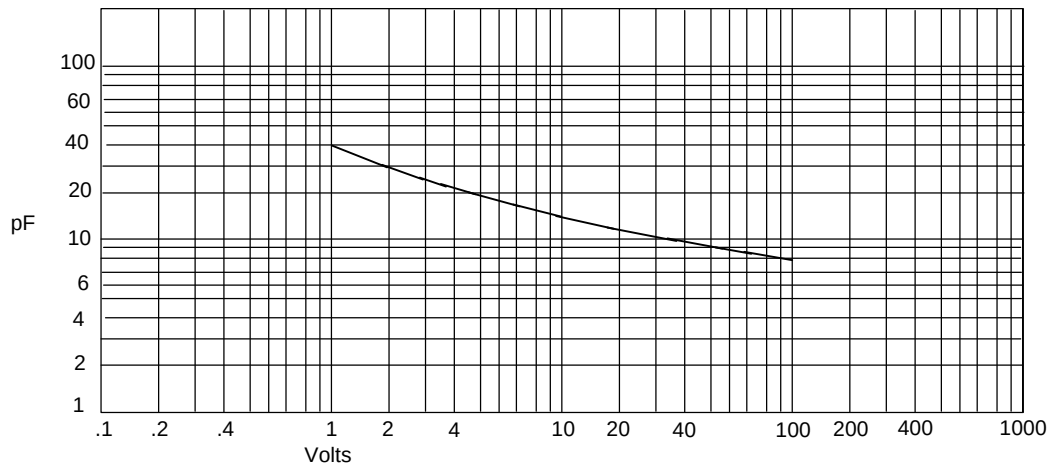
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

Figure 3
Junction Capacitance



Junction Capacitance - pF versus
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

S2A thru S2M

