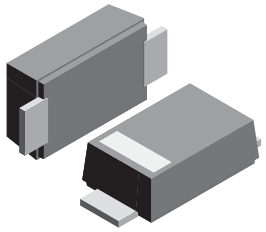
SUNMATE SEMICONDUCTORCO · LIMITED

S2AF - S2MF

SURFACE MOUNT SILICON RECTIFIER DIODES



VOLTAGE RANGE: 50 - 1000V
CURRENT: 2.0 A

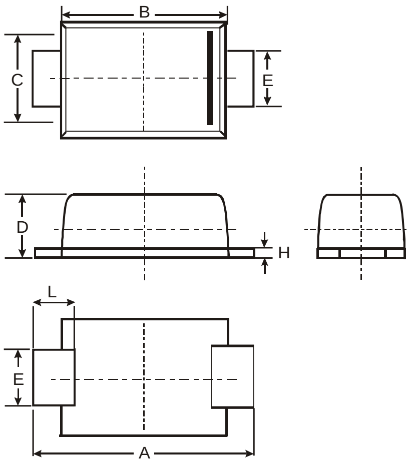
Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Ideally Suited for Automated Assembly

Mechanical Data

- Case:SMBF , Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces,0.05grams

RoHS COMPLIANT



SMBF			
Dim	**Min**	**Max**	**Typ**
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75
All Dimensions in mm			

Maximum Ratings and Electrical Characteristics @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	S2AF	S2BF	S2DF	S2GF	S2JF	S2KF	S2MF	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_T = 100°C	$I_{(AV)}$	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							A
Forward Voltage @ I_F = 2.0A	V_{FM}	1.1							V
Peak Reverse Current @T_A = 25°C at Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	5.0 200							µA
Typical Total Capacitance (Note 1)	C_T	30							pF
Typical Thermal Resistance, Junction to Terminal (Note 2)	$R_{\theta JT}$	16							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes:
1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to Terminal, unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pads as heat sink.

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RATING AND CHARACTERISTIC CURVES S2AF THRU S2MF

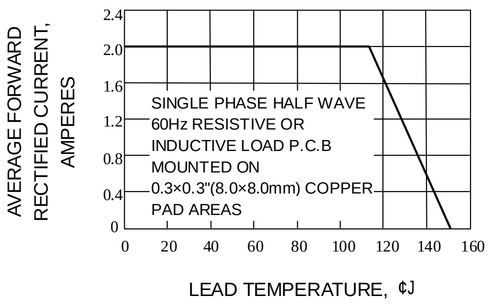

Fig. 1-FORWARD CURRENT DERATING CURVE

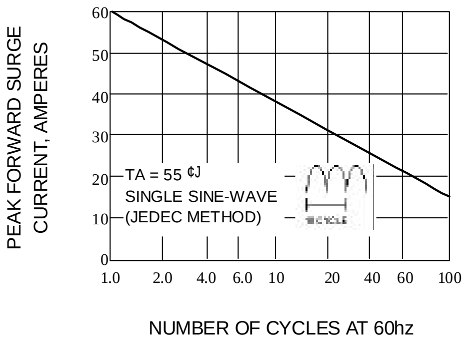

Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

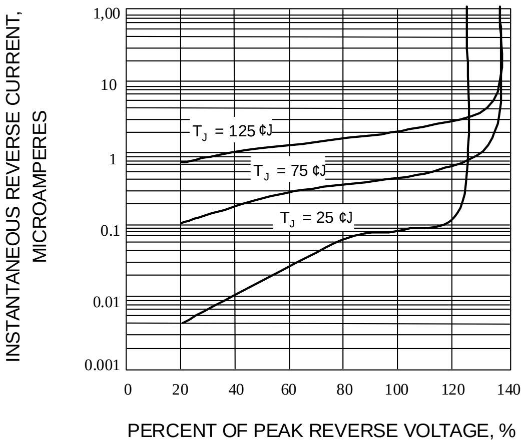

Fig. 3-TYPICAL REVERSE CHARACTERISTICS

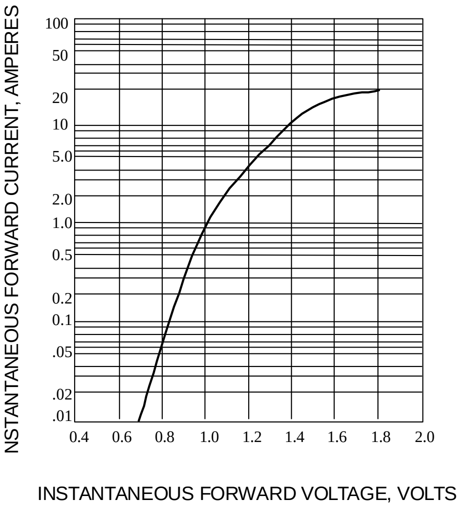

Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

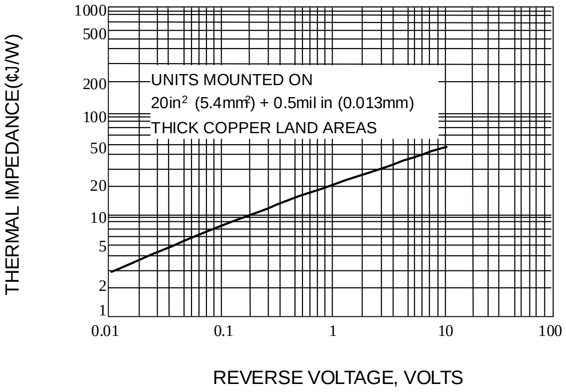

Fig. 5-TRANSIENT THERMAL IMPEDANCE

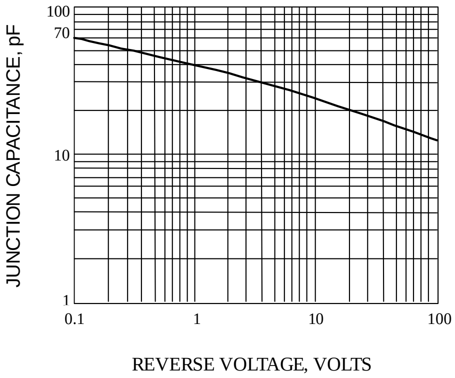

Fig. 6-TYPICAL JUNCTION CAPACITANCE