# **S2AF THRU S2MF**

## **Surface Mount General Rectifiers**

Reverse Voltage - 50 to 1000 V Forward Current - 2 A

#### **Features**

- · Low profile package
- · For surface mounted applications
- · High current capability
- · Built-in strain relief, ideal for automated placement
- · Plastic package has Underwriters Laboratory flammability classification 94V-0

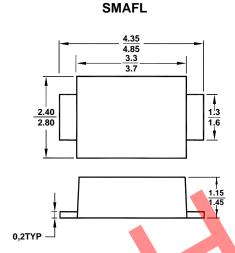
#### **Mechanical Data**

· Case: SMAFL molded plastic body

• Terminals: Solder plated, solderable per MIL-

STD-750, Method 2026

· Polarity: Color band denotes cathode end



All Dimensions in mm

### **Maximum Ratings and Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	S2AF	S2BF	S2DF	S2GF	S2JF	S2KF	S2MF	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	٧
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current at T <sub>L</sub> = 100°C	I <sub>F(AV)</sub>	2							Α
Peak Forward Surge Current @ TL=110°C 8.3ms Single Half-Sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	60							А
Maximum Forward Voltage at I <sub>F</sub> = 2 A	$V_{F}$	1.0					V		
Maximum DC Reverse Current at $T_a = 25^{\circ}$ C at Rated DC Blocking Voltage at $T_a = 125^{\circ}$ C	I <sub>R</sub>	5 100							μА
Typical Junction Capacitance 1)	$C_J$	20						pF	
Typical Thermal Resistance 2)	$R_{\theta JL}$	17						°C/W	
Operating and Storage Temperature Range	$T_j$ , $T_{stg}$	-55 to + 150							°C

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V.







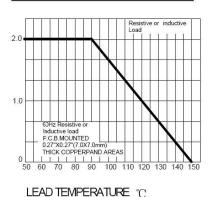




<sup>&</sup>lt;sup>2)</sup>Thermal resistance from junction to lead

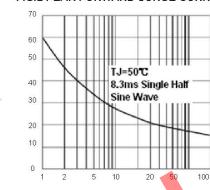
#### FIG.1 -- FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT, AMPERES



#### FIG.2 PEAK FORWARD SURGE CURRENT





NUMBER OF CYCLES AT 60Hz

#### FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT, AMPERES

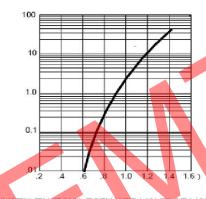
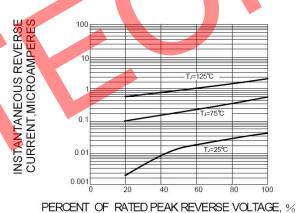


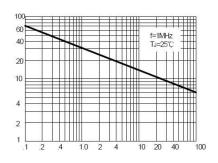
FIG.4 -- TYPICAL REVERSE CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

# FIG.5-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE PF



REVERSE VOLTAGE, VOLTS



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