

**Surface Mount Silicon Rectifier**  
Rectifier Reverse Voltage 2000V

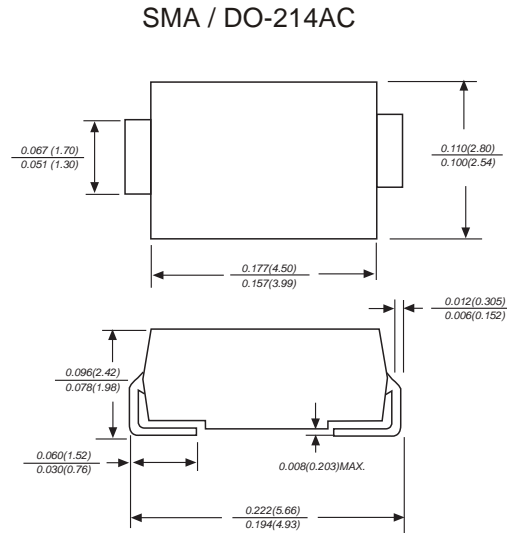


**Features**

- Ideal for surface mount application
- Surge overload rating to 30A peak
- Plastic material has UL recognition flammability classification 94V-0
- Built-in strain relief

**Mechanical Data**

Case: Molded plastic  
 Terminals: Solder plated solderable per MIL-STD-202F, Method 208  
 Polarity: Color band denotes cathode end  
 Mounting Position: Any  
 Weight: 0.063grams (approx)



Dimensions in inches and (millimeters)

**Maximum Ratings & Thermal Characteristics**

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

| Parameter   | Symbol   | M520         | unit |
|---|----------|--------------|------|
| Maximum repetitive peak reverse voltage   | VRRM     | 2000         | V    |
| Maximum RMS bridge input voltage  | VRMS     | 1600         | V    |
| Maximum DC blocking voltage   | VDC      | 2000         | V    |
| Maximum average forward rectified output current at TA=100°C                          | IF(AV)   | 1.0          | A    |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM     | 30.0         | A    |
| Typical thermal resistance per element (1)  | ReJA     | 28           | °C/W |
| Typical junction capacitance per element (2)  | Cj       | 10           | pF   |
| Operating junction and storage temperature range                                      | TJ, TSTG | -65 to + 150 | °C   |

**Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

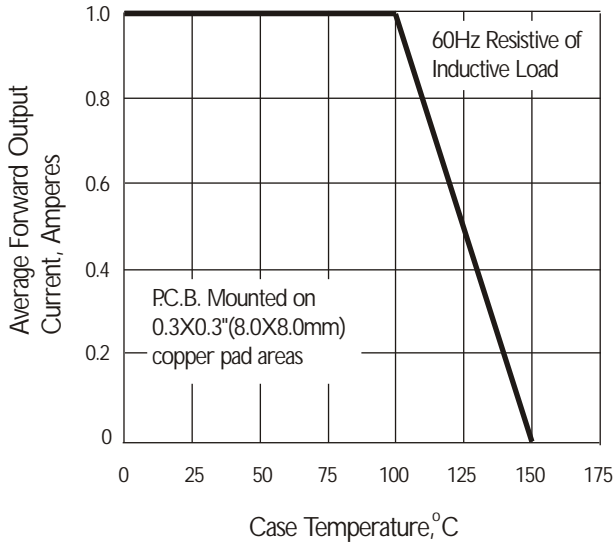
| Parameter  | Symbol | M520       | Unit |
|--|--------|------------|------|
| Maximum instantaneous forward voltage drop per leg at 1.0A                             | VF     | 1.2        | V    |
| Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C | IR     | 2.0<br>100 | μA   |

**Notes:** (1) Thermal resistance from Junction to Ambient on P.C.board mounting.  
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

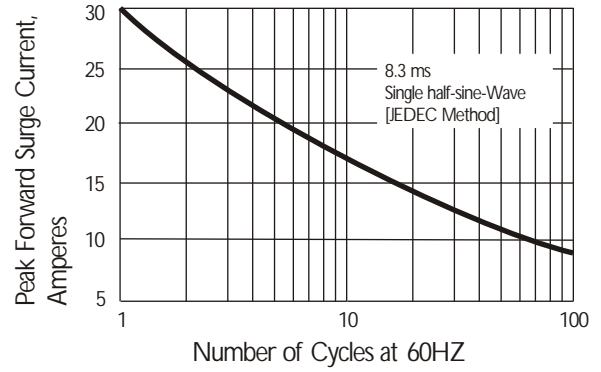
# Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted )

M520

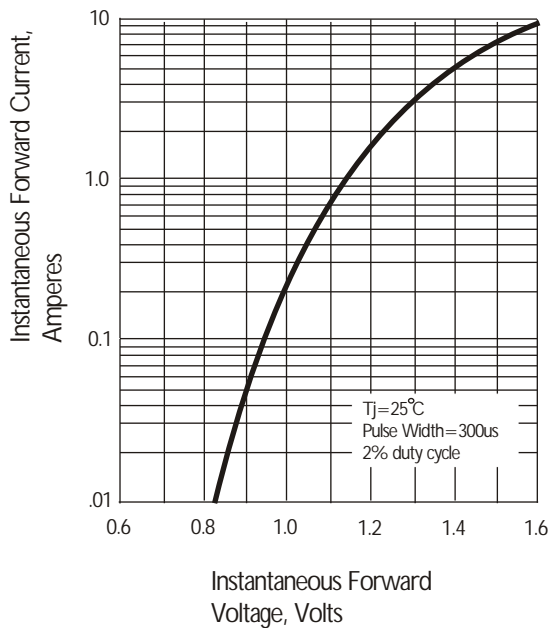
**Fig. 1 Derating Curve for Output Rectified Current**



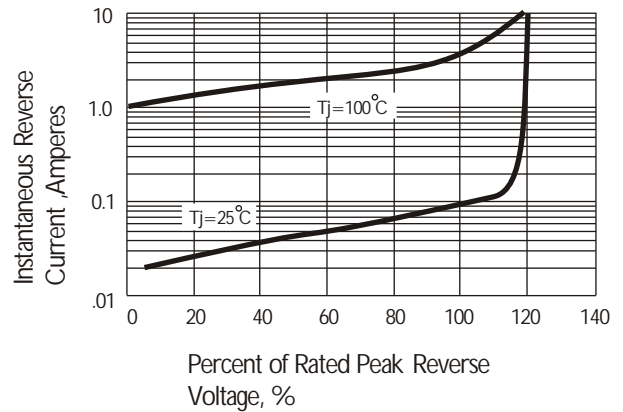
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



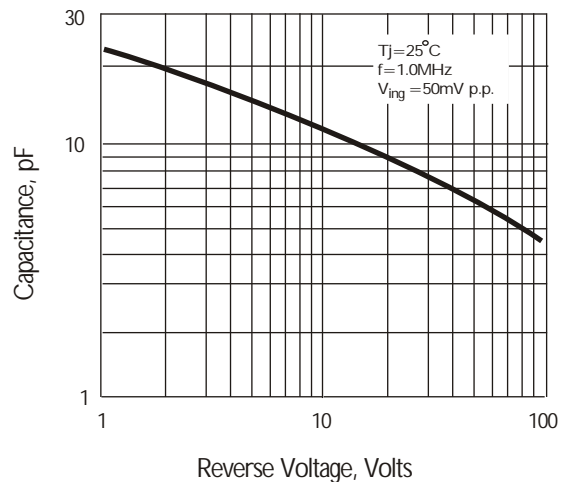
**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**



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