

# SM520LAF THRU SM5100LAF

# GW

## 5.0 AMP LOW VF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

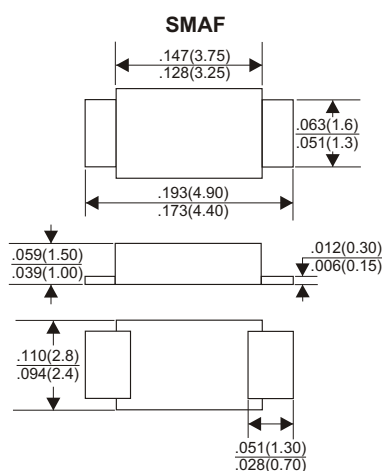
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 100 Volts

### CURRENT

5.0 Amperes



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER                                                                                           | SM520LAF   | SM540LAF | SM560LAF   | SM580LAF | SM5100LAF | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|----------|------------|----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20         | 40       | 60         | 80       | 100       | V     |
| Maximum RMS Voltage                                                                                   | 14         | 28       | 42         | 56       | 70        | V     |
| Maximum DC Blocking Voltage                                                                           | 20         | 40       | 60         | 80       | 100       | V     |
| Maximum Average Forward Rectified Current<br>see Fig1.                                                | 5.0        |          |            |          |           | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 80         |          |            |          |           | A     |
| Maximum Instantaneous Forward Voltage at 5.0A                                                         | 0.48       | 0.63     | 0.78       |          |           | V     |
| Maximum DC Reverse Current<br>Ta=25℃                                                                  | 0.5        |          |            |          |           | mA    |
| at Rated DC Blocking Voltage<br>Ta=100℃                                                               | 50         |          |            |          |           |       |
| Typical Junction Capacitance (Note1)                                                                  | 500        | 380      |            |          |           | pF    |
| Typical Thermal Resistance RθJA (Note 2)                                                              | 15         | 10       |            |          |           | ℃/W   |
| Operating Temperature Range Tj                                                                        | -55 — +125 |          | -55 — +150 |          |           | ℃     |
| Storage Temperature Range Tstg                                                                        | -55 — +150 |          |            |          |           | ℃     |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (SM520LAF THRU SM5100LAF)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

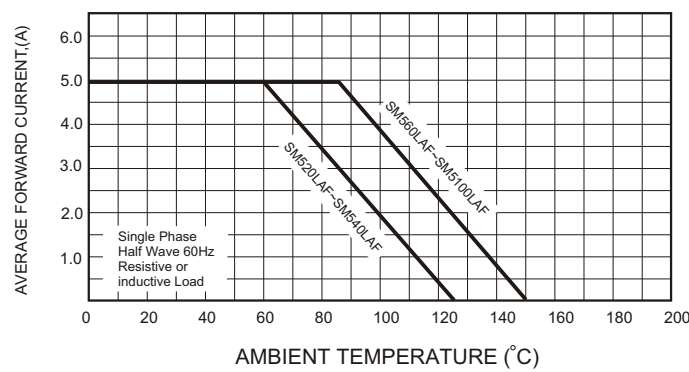


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

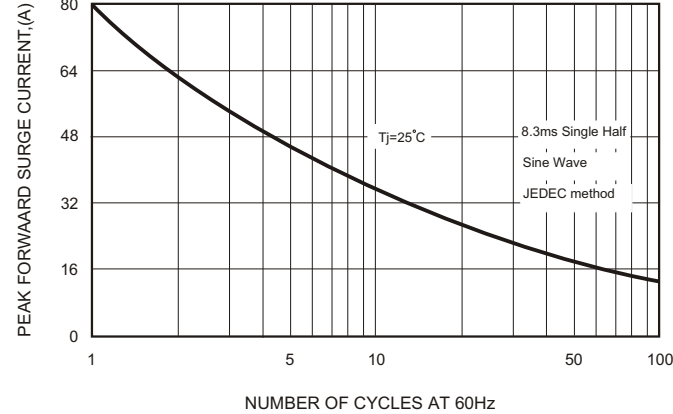


FIG.4-TYPICAL JUNCTION CAPACITANCE

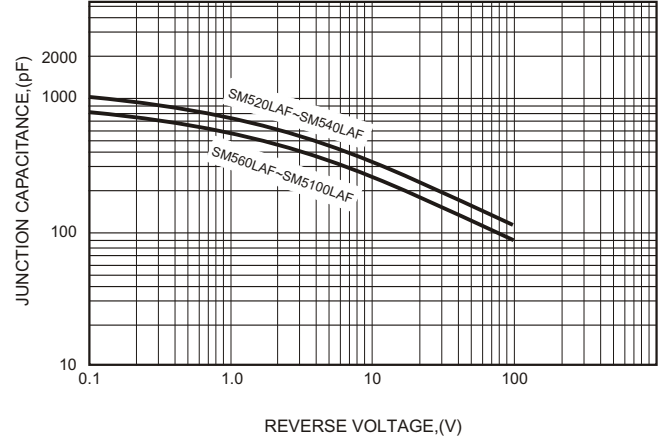


FIG.2-TYPICAL FORWARD CHARACTERISTICS

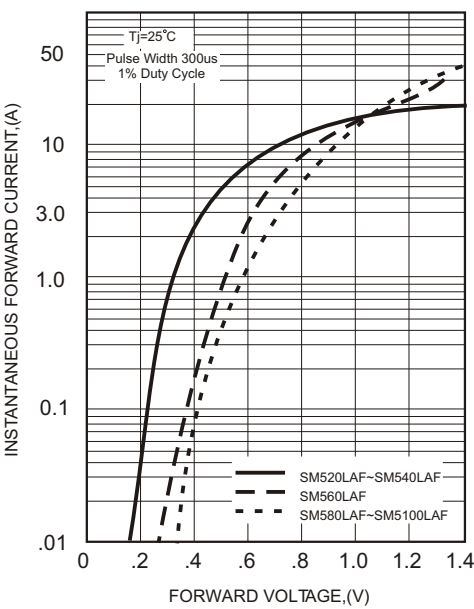


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

