

## Surface Mount Schottky Rectifier

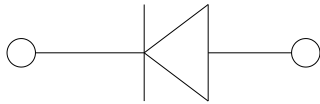


### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low VF
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

For use in low voltage high frequency inverters, Freewheeling, DC/DC converters, and polarity protection Applications.



### Mechanical Data

- **Package:** SMAF  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                        | SYMBOL | UNIT | SL24F     | SL245F | SL26F | SL210F |
|----------------------------------------------------------------------------------|--------|------|-----------|--------|-------|--------|
| Device marking code                                                              |        |      | SL24F     | SL245F | SL26F | SL210F |
| Repetitive peak reverse voltage                                                  | VRRM   | V    | 40        | 45     | 60    | 100    |
| Average rectified output current<br>@60Hz sine wave, Resistance load, TL (FIG.1) | IO     | A    | 2.0       |        |       |        |
| Surge(non-repetitive)forward current<br>@60HZ Half-sine wave, 1 cycle, Tj=25°C   | IFSM   | A    | 50        |        |       |        |
| Storage temperature                                                              | Tstg   | °C   | -55 ~+150 |        |       |        |
| Junction temperature                                                             | Tj     | °C   | -55 ~+150 |        |       |        |

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                    | SYMBOL | UNIT | TEST CONDITIONS | SL24F | SL245F | SL26F | SL210F |
|------------------------------------------------------------------------------|--------|------|-----------------|-------|--------|-------|--------|
| Maximum instantaneous forward voltage drop per diode                         | VF     | V    | IFM=2.0A        | 0.47  |        | 0.55  | 0.75   |
| Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM | IR     | mA   | Ta=25°C         | 0.5   |        |       | 0.1    |
|                                                                              |        |      | Ta=100°C        | 10    |        |       | 5      |

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



## SL24F THRU SL210F

### ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| PARAMETER          | SYMBOL         | UNIT                 | SL24F             | SL245F | SL26F | SL210F |
|--------------------|----------------|----------------------|-------------------|--------|-------|--------|
| Thermal Resistance | R $\theta$ J-A | $^{\circ}\text{C/W}$ | 65 <sup>(1)</sup> |        |       |        |
|                    | R $\theta$ J-L |                      | 20 <sup>(1)</sup> |        |       |        |

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

### ■ Characteristics (Typical)

FIG1:  $I_o$ -TL Curve

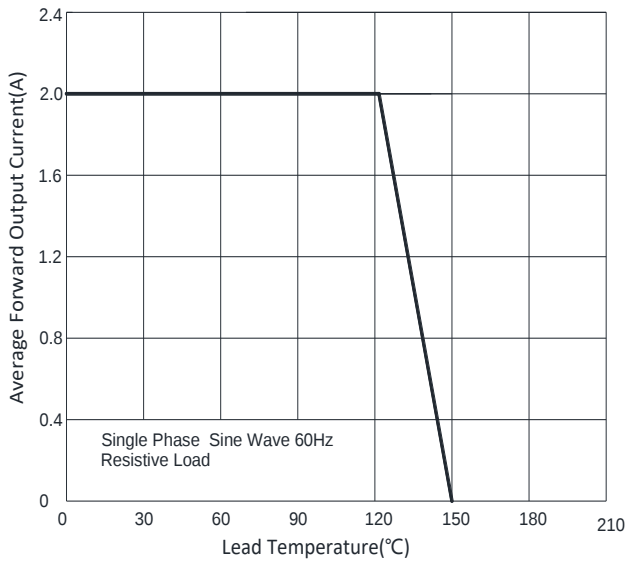


FIG2: Surge Forward Current Capability

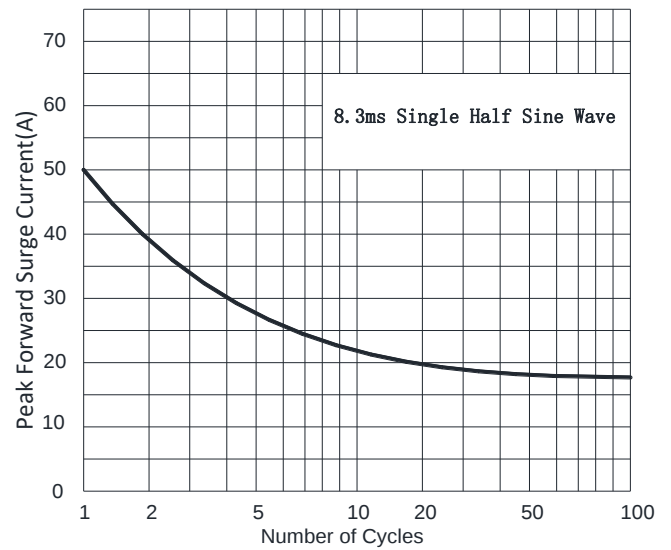


FIG3: Forward Voltage

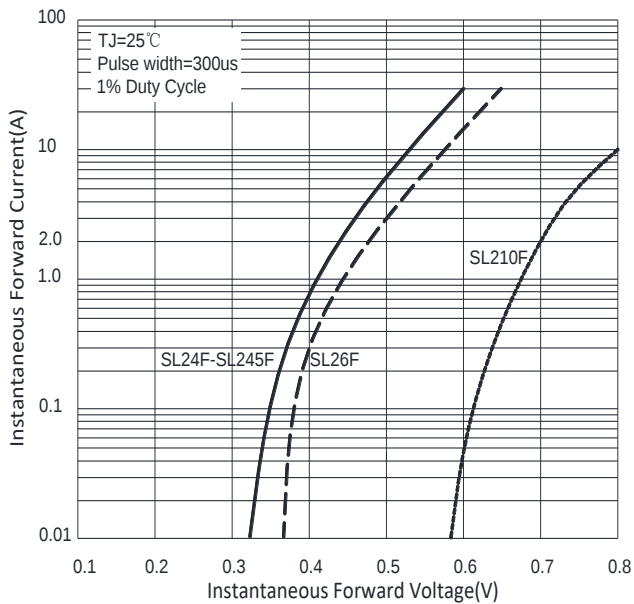
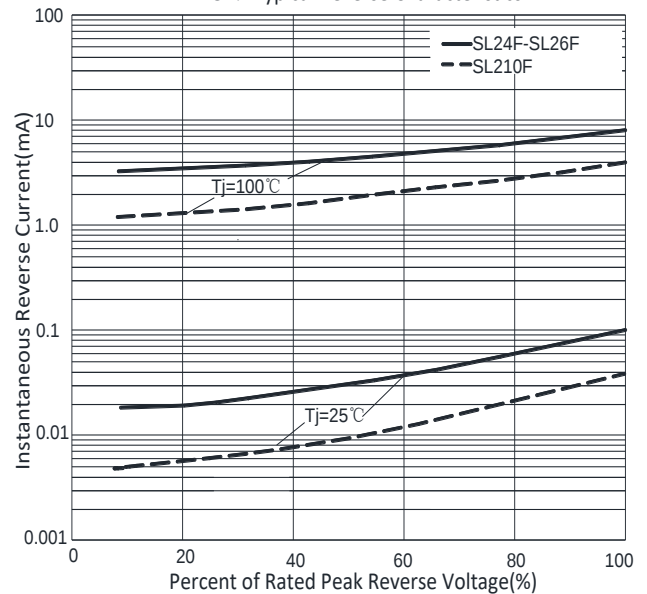


FIG4: Typical Reverse Characteristics



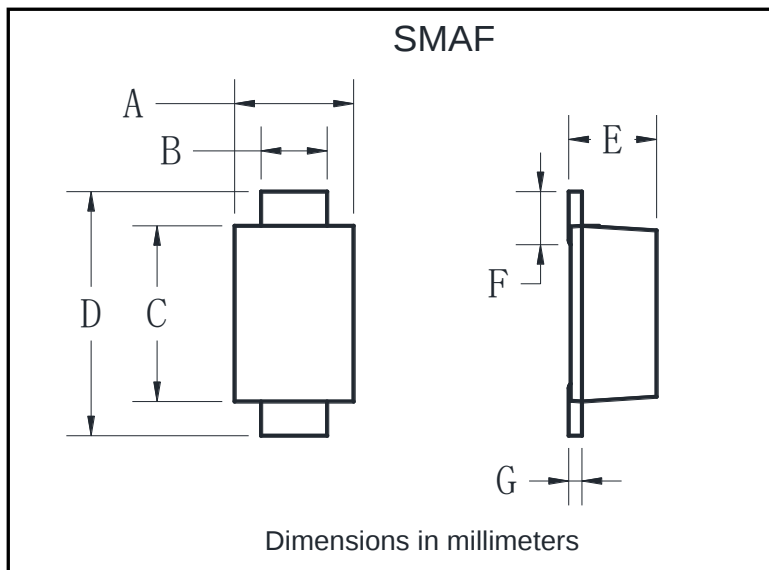


## SL24F THRU SL210F

### ■ Ordering Information (Example)

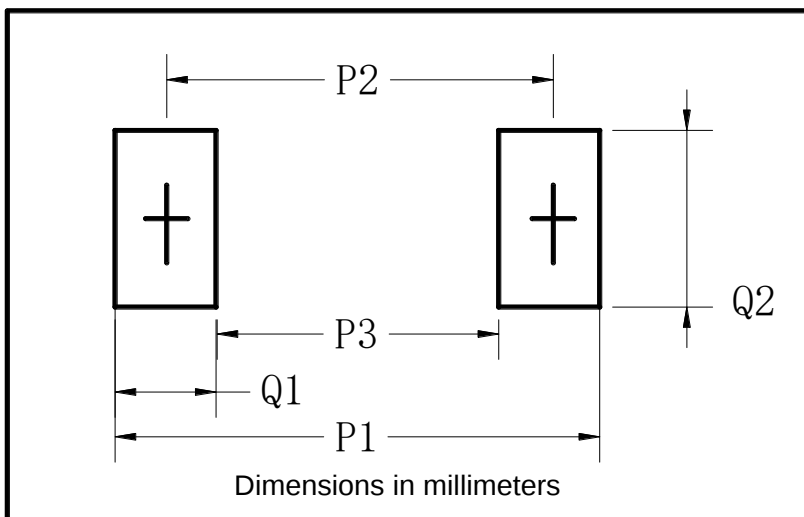
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| SL24F-SL210F  | F1           | Approximate 0.034 | 3000                 | 24000                   | 96000                      | 7" reel       |
| SL24F-SL210F  | F2           | Approximate 0.034 | 10000                | 20000                   | 160000                     | 13" reel      |
| SL24F-SL210F  | F3           | Approximate 0.034 | 10000                | 20000                   | 120000                     | 13" reel      |
| SL24F-SL210F  | F4           | Approximate 0.034 | 7500                 | 15000                   | 120000                     | 13" reel      |

### ■ Outline Dimensions



| SMAF |      |      |
|------|------|------|
| Dim  | Min  | Max  |
| A    | 2.40 | 2.80 |
| B    | 1.35 | 1.45 |
| C    | 3.40 | 3.60 |
| D    | 4.40 | 4.80 |
| E    | 1.05 | 1.25 |
| F    | 0.50 | 1.00 |
| G    | 0.15 | 0.25 |

### ■ Suggested pad layout



| SMAF |             |
|------|-------------|
| Dim  | Millimeters |
| P1   | 6.50        |
| P2   | 4.00        |
| P3   | 1.50        |
| Q1   | 2.50        |
| Q2   | 1.70        |



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