



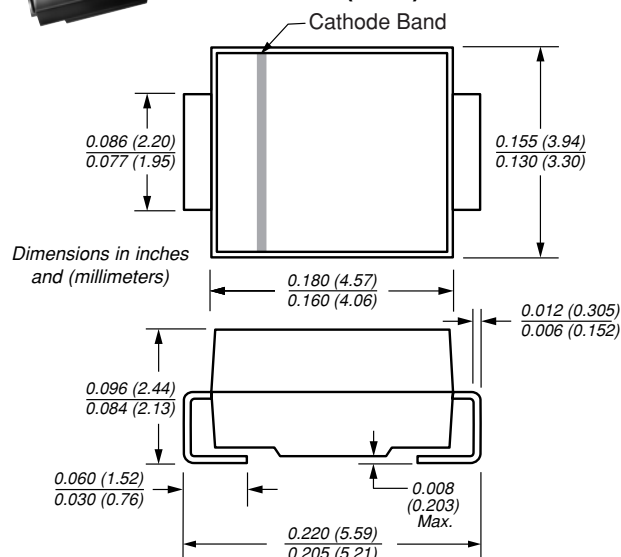
## SS22 thru SS26

Vishay Semiconductors  
formerly General Semiconductor

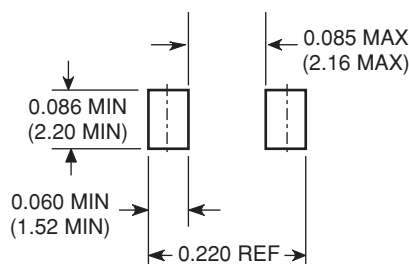
### Surface Mount Schottky Rectifiers

DO-214AA (SMB)

Reverse Voltage 20 to 60V  
Forward Current 2.0A



#### Mounting Pad Layout



### Mechanical Data

**Case:** JEDEC DO-214AA molded plastic body

**Terminals:** Solder plated, solderable per MIL-STD750, Method 2026

High temperature soldering guaranteed:  
250°C/10 seconds at terminals

**Polarity:** Color band denotes cathode end

**Weight:** 0.003 oz., 0.093 g

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

| Parameter                                                                                        | Symbol                               | SS22                      | SS23 | SS24 | SS25 | SS26 | Unit |
|--------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------|------|------|------|------|------|
| Device marking code                                                                              |                                      | S2                        | S3   | S4   | S5   | S6   |      |
| Maximum repetitive peak reverse voltage                                                          | V <sub>RRM</sub>                     | 20                        | 30   | 40   | 50   | 60   | V    |
| Maximum RMS voltage                                                                              | V <sub>RMS</sub>                     | 14                        | 21   | 28   | 35   | 42   | V    |
| Maximum DC blocking voltage                                                                      | V <sub>DC</sub>                      | 20                        | 30   | 40   | 50   | 60   | V    |
| Max. average forward rectified current at T <sub>L</sub> (See Fig. 1)                            | I <sub>F(AV)</sub>                   | 2.0                       |      |      |      |      | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                     | 75                        |      |      |      |      | A    |
| Non-repetitive avalanche energy at T <sub>A</sub> = 25°C, I <sub>AS</sub> = 2.0A, L = 10mH       | E <sub>AS</sub>                      | 20                        |      |      |      |      | mJ   |
| Typical thermal resistance <sup>(2)</sup>                                                        | R <sub>θJA</sub><br>R <sub>θJL</sub> | 75<br>17                  |      |      |      |      | °C/W |
| Voltage rate of change (rated V <sub>R</sub> )                                                   | dv/dt                                | 10,000                    |      |      |      |      | V/μs |
| Operating junction temperature range                                                             | T <sub>J</sub>                       | -65 to +125   -65 to +150 |      |      |      |      | °C   |
| Storage temperature range                                                                        | T <sub>STG</sub>                     | -65 to +150               |      |      |      |      | °C   |

### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

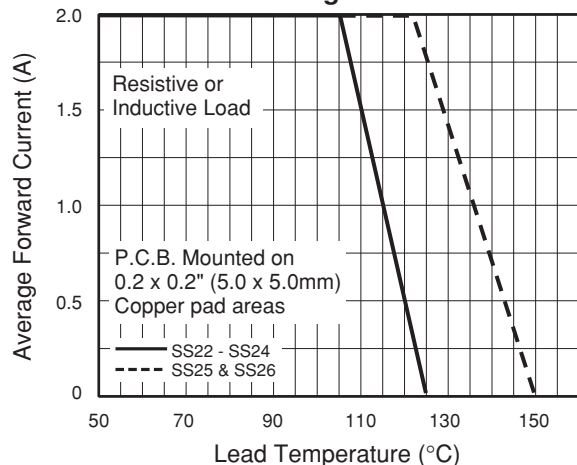
|                                                                                                                              |                |           |      |    |
|------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|------|----|
| Maximum instantaneous forward voltage at 2.0A <sup>(1)</sup>                                                                 | V <sub>F</sub> | 0.50      | 0.70 | V  |
| Maximum DC reverse current <sup>(1)</sup><br>at rated DC blocking voltage<br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 100°C | I <sub>R</sub> | 0.4<br>10 |      | mA |

**Notes:** (1) Pulse test: 300μs pulse width, 1% duty cycle

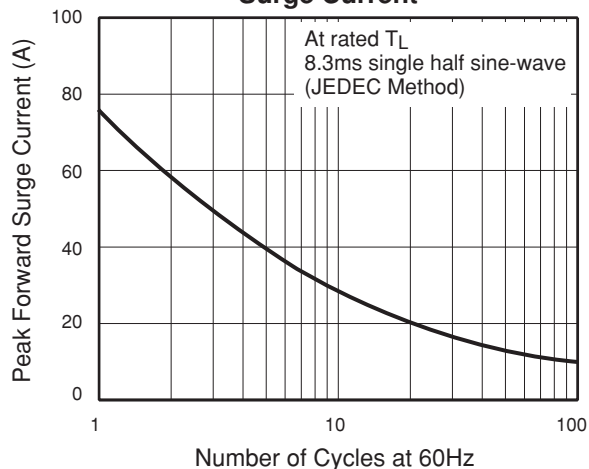
(2) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

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

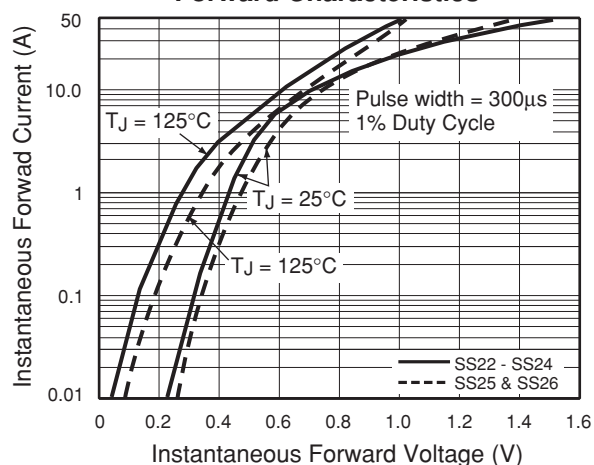
**Fig. 1 - Forward Current Derating Curve**



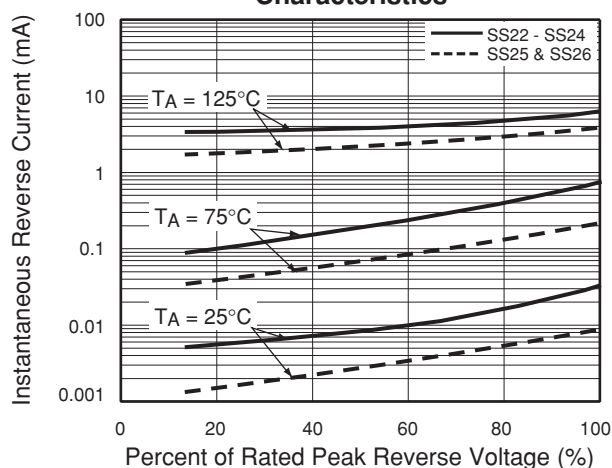
**Fig. 2 - Maximum Non-repetitive Surge Current**



**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Current Characteristics**



**Fig. 5 - Typical Junction Capacitance**

