



## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### SSL42 THRU SSL44

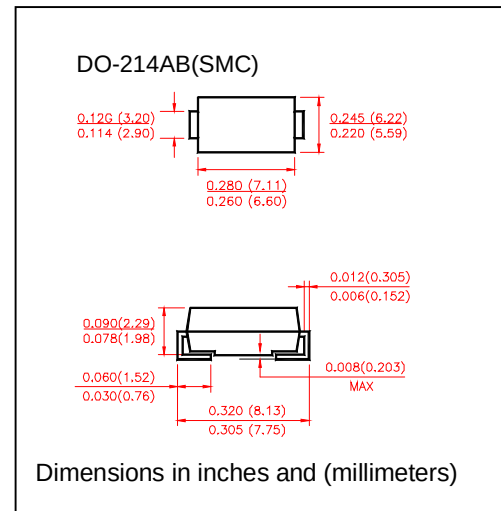
**VOLTAGE RANGE****20 to 40 Volts****CURRENT****4.0 Ampere**

### FEATURES

- Low profile surface mount package
- Built-in strain relief
- High switching speed, low  $V_F$
- Low voltage drop, high efficiency
- For use in low voltage high frequency inverters, Free willing ,and polarity protection applications
- Guardring for over voltage protection

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounce, 0.25 gram-DO-214AB(SMC)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

|                                                                                                  |                       | SYMBOLS           | SSL42         | SSL43 | SSL44 | UNIT  |
|--------------------------------------------------------------------------------------------------|-----------------------|-------------------|---------------|-------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                          |                       | V <sub>RRM</sub>  | 20            | 30    | 40    | Volts |
| Maximum RMS Voltage                                                                              |                       | V <sub>RMS</sub>  | 20            | 30    | 40    | Volts |
| Maximum DC Blocking Voltage                                                                      |                       | V <sub>DC</sub>   | 20            | 30    | 40    | Volts |
| Maximum Average Forward Rectified Current at T <sub>L</sub> see figure1 T <sub>L</sub> =95℃      |                       | I <sub>(AV)</sub> | 4.0           |       |       | Amps  |
| Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method) |                       | I <sub>FSM</sub>  | 100           |       |       | Amps  |
| Maximum Instantaneous Forward Voltage @ 4.0A(Note1)                                              |                       | V <sub>F</sub>    | 0.42          |       | 0.46  | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage per element                              | T <sub>A</sub> = 25℃  | I <sub>R</sub>    | 0.5           |       |       | mA    |
|                                                                                                  | T <sub>A</sub> = 100℃ |                   | 10.0          |       |       |       |
| Typical Thermal Resistance (Note 2)                                                              |                       | R <sub>θJA</sub>  | 55            |       |       | ℃/W   |
|                                                                                                  |                       | R <sub>θJL</sub>  | 12            |       |       |       |
| Operating Junction Temperature                                                                   |                       | T <sub>J</sub>    | (-55 to +150) |       |       | ℃     |
| Storage Temperature Range                                                                        |                       | T <sub>STG</sub>  | (-55 to +150) |       |       | ℃     |

#### Notes:

1. Pulse test: 300  $\mu$  s pulse width, 1% duty cycle
2. PCB mounted with 0.2"  $\times$  0.2" (5.0cm  $\times$  5.0cm) copper pads



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### RATING AND CHARACTERISTIC CURVES SSL42 THRU SSL44

FIG.1-TYPICAL FORWARD CURRENT  
DERATING CURVE

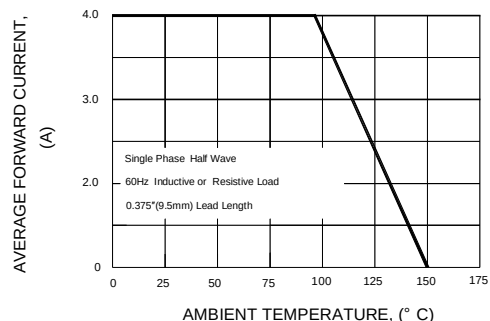


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

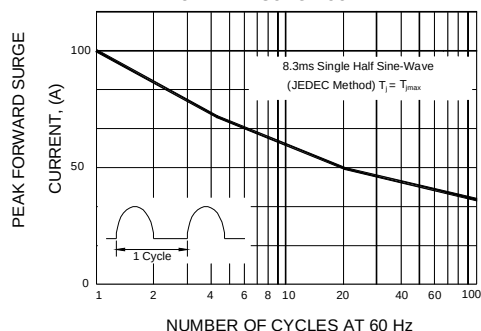


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

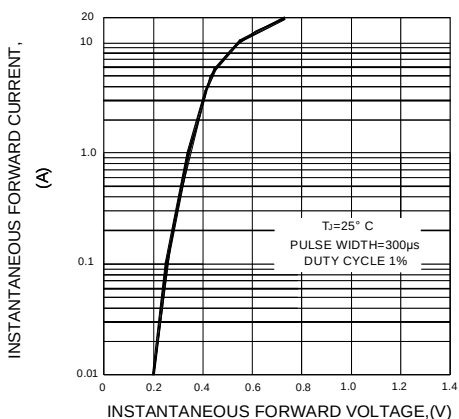


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

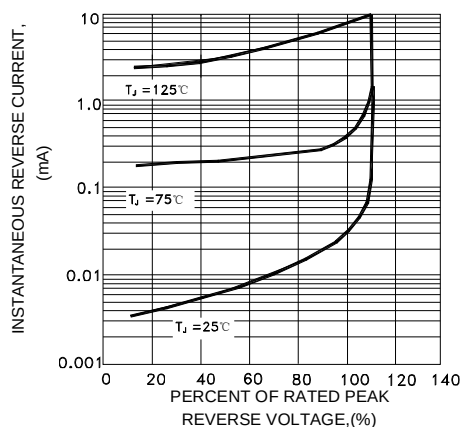


FIG.5-TYPICAL JUNCTION CAPACITANCE

