

## Surface Mount Schottky Barrier Rectifier

### FEATURES

- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Meets environmental standard MIL-S-19500D
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 275 °C, 10 s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



DO-214AC • SMA •

### TYPICAL APPLICATIONS

For use in general purpose rectification of lighting, power supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecommunication.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3 A
$V_{RRM}$	20 V to 100 V
$I_{FSM}$	80A
$V_F$	0.42V+ 0.5V+ 0.75V
$T_J \text{ max.}$	125 °C+ 450 °C

### MECHANICAL DATA

**Case:** DO-214AC, molded epoxy body • Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22B-106

**Polarity:** Laser Band Denotes Cathode Band

MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)											
PARAMETER	SYMBOL	SL32A	SL33A	SL34A	SL35A	SL36A	SL37A	SL38A	SL39A	SL310 A	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current at $T_L$ (See Fig. 1)	$I_{F(AV)}$	3									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	80									A
Operating junction temperature range	$T_J$	- 55 to + 125				- 55 to + 150					°C
Storage temperature range	$T_{stg}$	- 55 to + 150									°C

ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)												
PARAMETER	TEST CONDITIONS	SYMBOL	SL32A	SL33A	SL34A	SL35A	SL36A	SL37A	SL38A	SL39A	SL310A	UNIT
Maximum instantaneous forward voltage	IF=3 A	V <sub>F</sub>	0.42			0.5		0.75				V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25°	I <sub>R</sub>	0.2					0.05				mA
	T <sub>A</sub> =100°		50					4				
Typical junction capacitance	4.0 V, 1 MHz	C <sub>J</sub>	285								pF	

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)											
PARAMETER	SYMBOL	SL32A	SL33A	SL34A	SL35A	SL36A	SL37A	SL38A	SL39A	SL310A	UNIT
Maximum thermal resistance	R <sub>θJA</sub> (1)	80									°C/W
	R <sub>θJT</sub> (2)	20									

Notes: (1) Thermal resistance from junction to ambient, 0.197" × 0.197" × 5.0" 5.0mm" copper pads to each terminal  
 (2) Thermal resistance from junction to terminal, 0.197" × 0.197" × 5.0" 5.0mm" copper pads to each terminal

### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

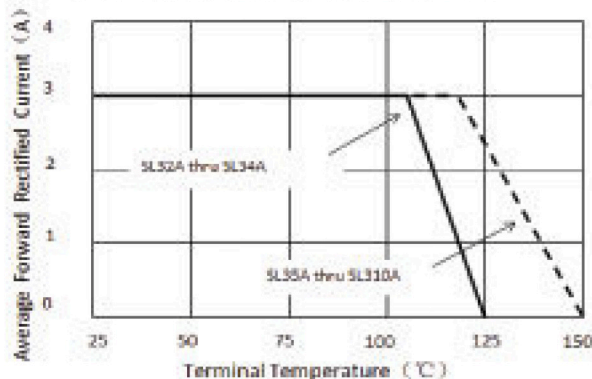


Figure 1. Forward Current Derating Curve

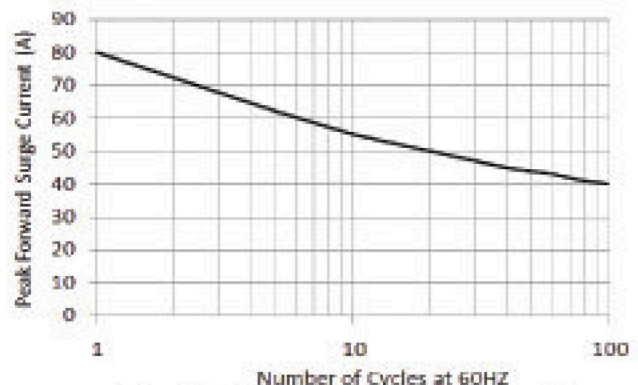


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

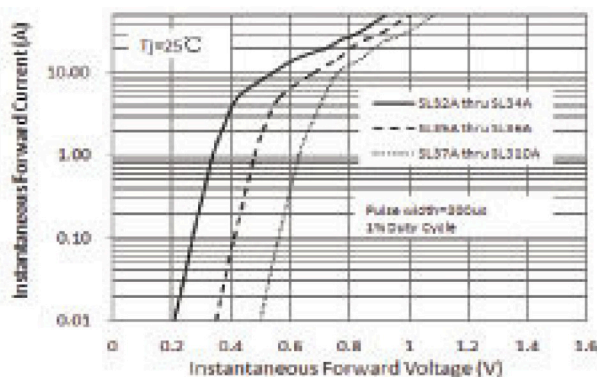


Figure 3. Typical Instantaneous Forward Characteristics

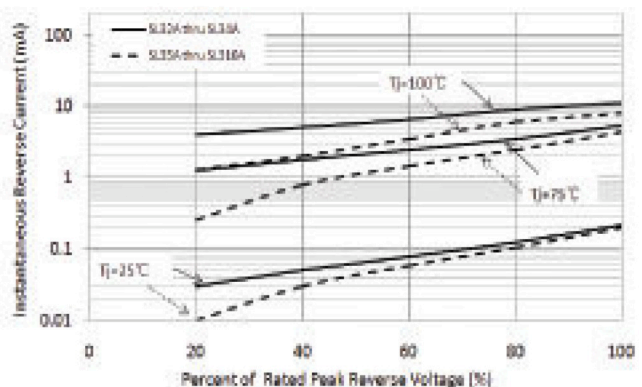


Figure 4. Typical Reverse Characteristics

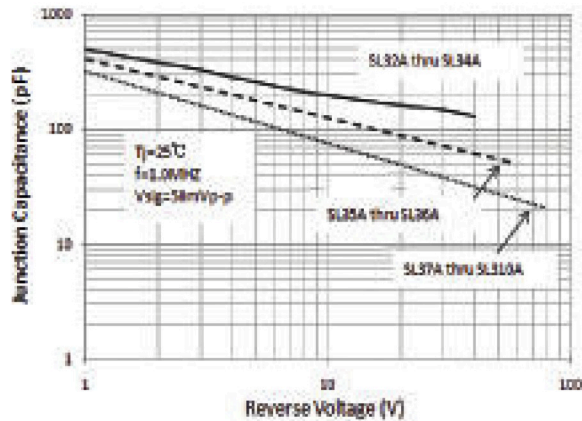


Figure 5. Typical Junction Capacitance

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

