

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-214AA (SMB)

TYPICAL APPLICATIONS

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

PRIMARY CHARACTERISTICS	
$I_F(AV)$	5 A
V_{RRM}	20 V to 100 V
I_{FSM}	120A , 250A
V_F	0.43V , 0.5V , 0.7V
$T_J \text{ max.}$	125 °C , 150 °C

MECHANICAL DATA

Case: DO-214AA, 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 (TA = 25 °C unless otherwise noted)											
PARAMETER	SYMBOL	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	UNIT
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	VRMS	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	VDC	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current at TL(See Fig.1)	IF(AV)	5									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	120					250				A
Operating junction temperature range	TJ	- 55 to + 125			- 55 to + 150						°C
Storage temperature range	TSTG	- 55 to + 150									°C

ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)												
PARAMETER	TEST CONDITIONS	SYMBOL	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510 B	UNIT
Maximum instantaneous forward voltage	IF=5A	VF	0.43			0.5		0.7				V
Maximum DC reverse current at rated DC blocking voltage	TA=25	IR	0.5					0.05				mA
	TA=100		50					50				
Typical junction capacitance	4.0 V, 1 MHz	CJ	350									pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)											
PARAMETER	SYMBOL	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	UNIT
Maximum thermal resistance	R _{θJA} (1)	72									°C/W
	R _{θJT} (2)	22									

Notes: (1) Thermal resistance from junction to ambient, 0.276 × 0.276" (7.0 × 7.0mm) copper pads to each terminal
(2) Thermal resistance from junction to terminal, 0.276 × 0.276" (7.0 × 7.0mm) copper pads to each terminal

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

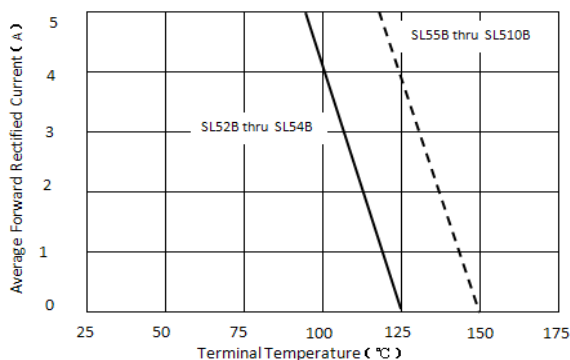


Figure 1. Forward Current Derating Curve

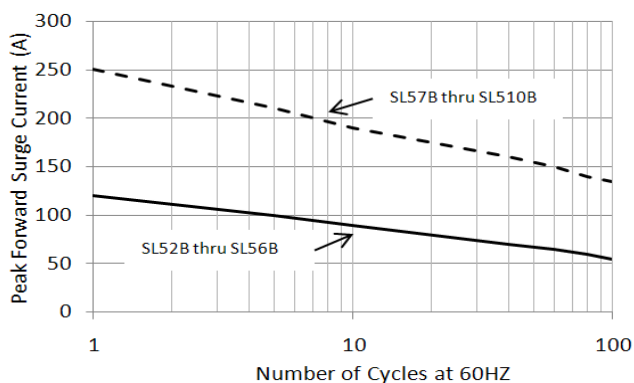


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

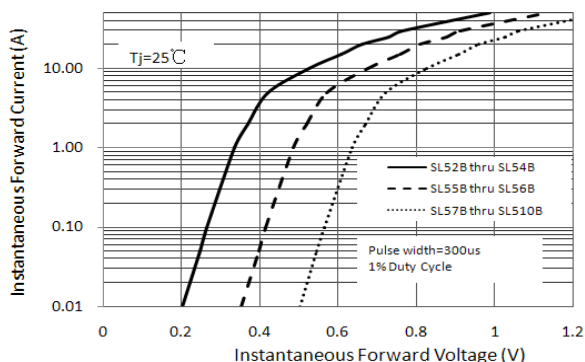


Figure 3. Typical Instantaneous Forward Characteristics

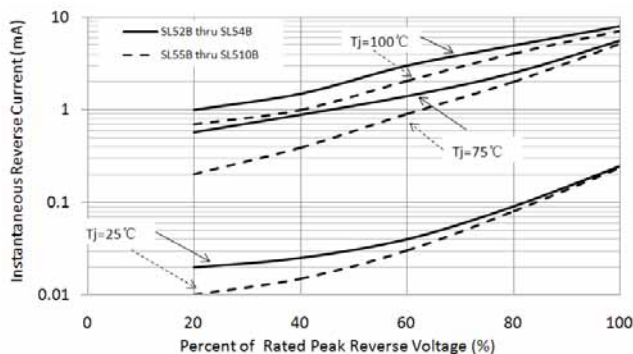


Figure 4. Typical Reverse Characteristics
rev.1

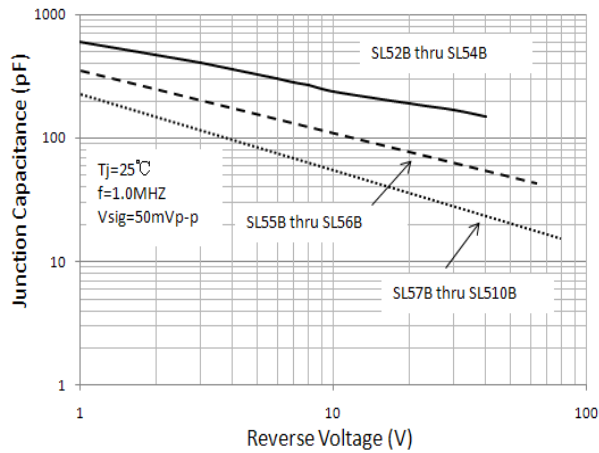


Figure 5. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

