

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-214AB (SMC)

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-214AB, 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	SL52C	SL53C	SL54C	SL55C	SL56C	SL57C	SL58C	SL59C	SL510C	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 TL(See Fig.1)	$I_{F(AV)}$	5									A	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120					250					A
Operating junction temperature range	T_J	- 55 to + 125					- 55 to + 150					°C
Storage temperature range	T_{STG}	- 55 to + 150									°C	



SL52C thru SL510C

ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)													
PARAMETER	TEST CONDITIONS	SYMBOL	SL52C	SL53C	SL54C	SL55C	SL56C	SL57C	SL58C	SL59C	SL510C	UNIT	
Maximum instantaneous forward voltage	IF=5 A	VF	0.43			0.5		0.7				V	
Maximum DC reverse current at rated DC blocking voltage	TA=25	IR	0.5									mA	
	TA=100		50										
Typical junction capacitance	4.0 V, 1 MHz	CJ	350										pF

THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)											
PARAMETER	SYMBOL	SL52C	SL53C	SL54C	SL55C	SL56C	SL57C	SL58C	SL59C	SL510C	UNIT
Maximum thermal resistance	RθJA (1)	60			-		90				°C/W
	RθJL (2)	12			16		-				

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 Lead, 0.276 × 0.276" (7.0 × 7.0mm) copper pads to each Lead

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

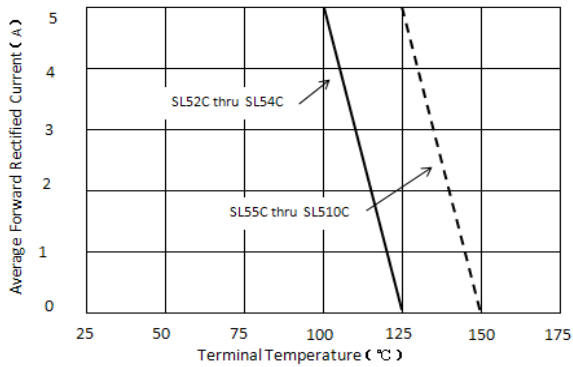


Figure 1. Forward Current Derating Curve

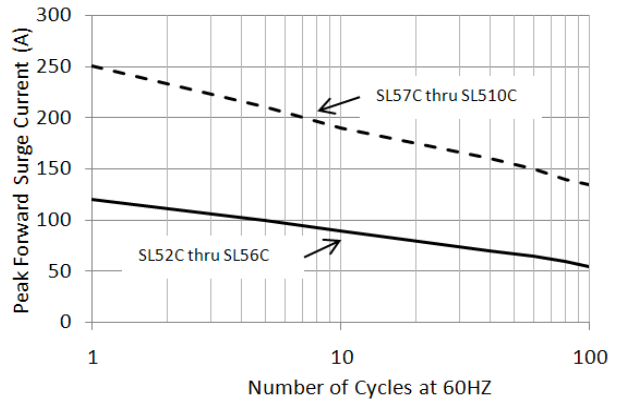


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

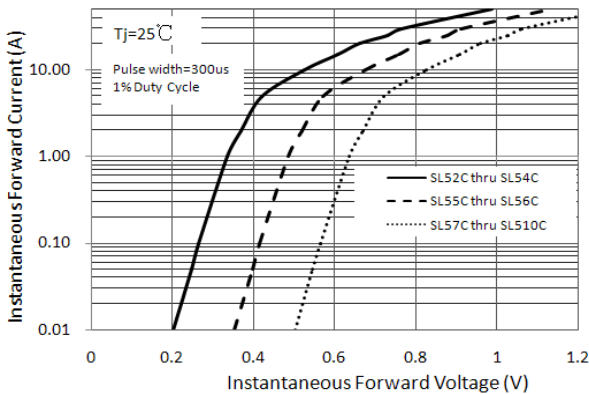


Figure 3. Typical Instantaneous Forward Characteristics

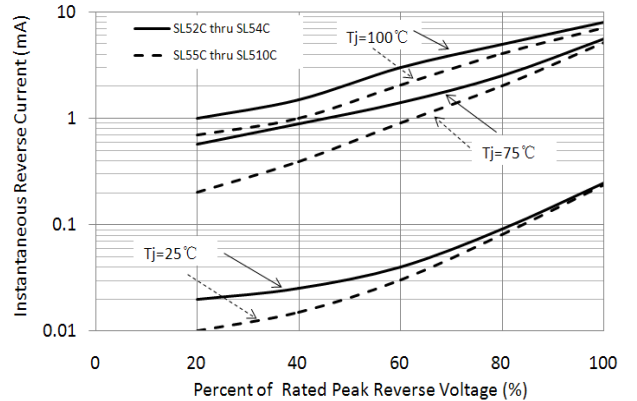


Figure 4. Typical Reverse Characteristics

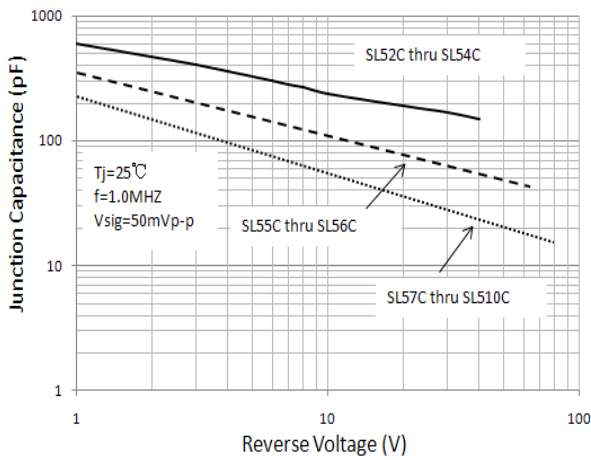


Figure 5. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

