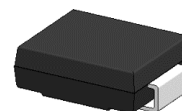


5A,20-40V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



RoHS
COMPLIANT

SMC (DO-214AB)

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)					
Parameter	Symbol	SL52C	SL53C	SL54C	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	V
Maximum RMS voltage	V _{RMS}	14	21	28	V
Maximum DC blocking voltage	V _{DC}	20	30	40	V
Maximum average forward rectified current	I _{F(AV)}	5			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	120			A
Operating junction temperature range	T _J	-55 to +125			°C
Storage temperature range	T _{STG}	-55 to +150			°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	65	°C / W
Thermal Resistance, Junction to Case	R _{θJC}	10	°C / W
Thermal Resistance, Junction to Lead	R _{θJL}	15	°C / W

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)						
Parameter	Symbol	Test Conditions	SL52C	SL53C	SL54C	Unit
Forward Drop Voltage	V_F	$I_F=5\text{A}$		0.43		V
Reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$		0.5		mA
		$T_J=100^{\circ}\text{C}$		50		
Typical junction capacitance	C_J	4.0 V 1 MHz		350		pF

Note:

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

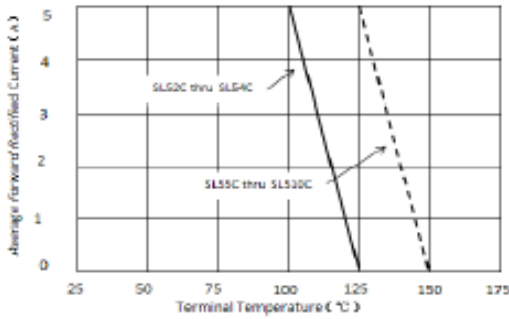


Figure 1. Forward Current Derating Curve

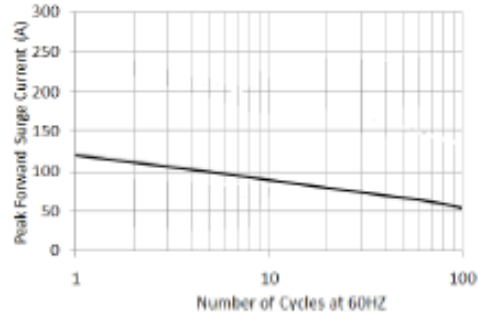


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

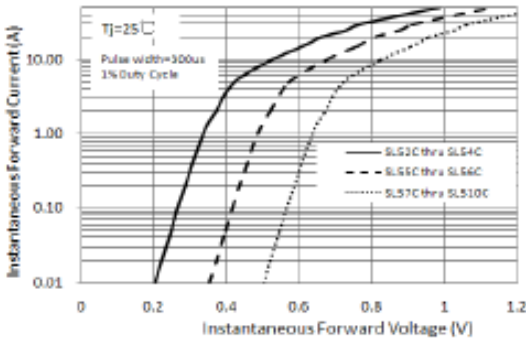


Figure 3. Typical Reverse Characteristics

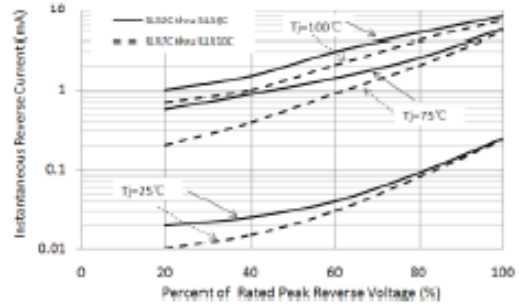


Figure 4. Typical Instantaneous Forward Characteristics

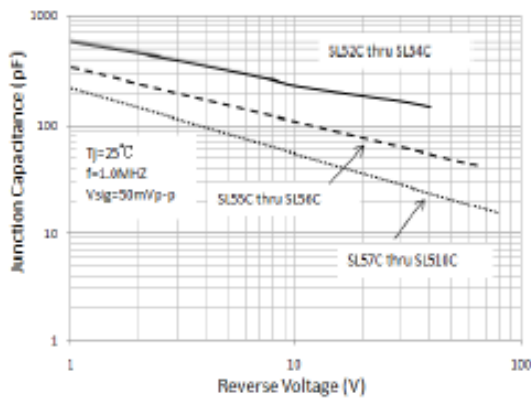
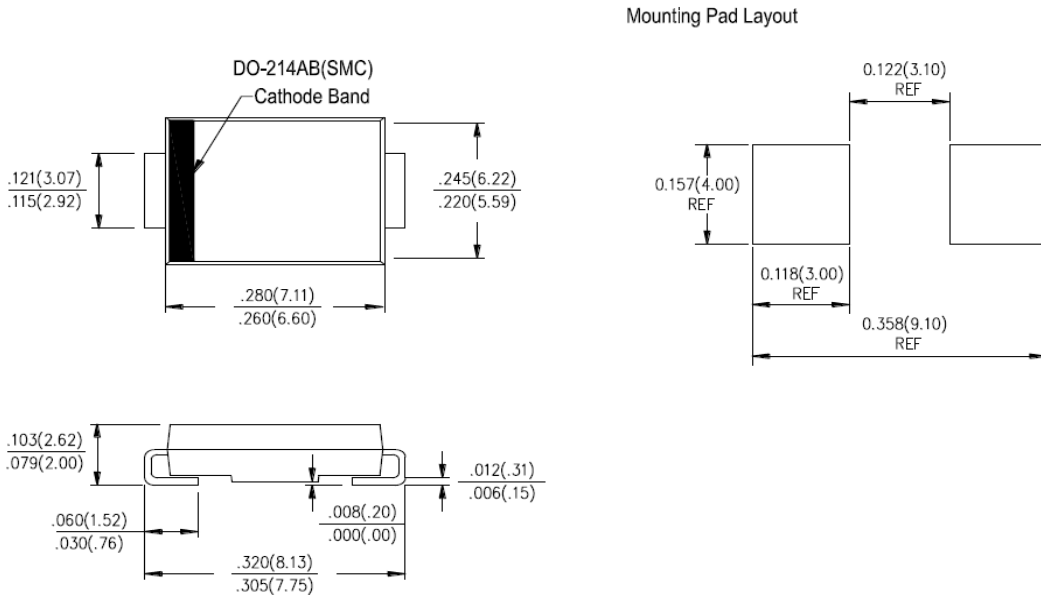


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

SMC (DO-214AB)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format

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