

5A,50-100V 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	SL55C	SL56C	SL57C	SL58C	SL59C	SL510C	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	60	70	80	90	100	V
Maximum RMS voltage	V _{RMS}	35	42	49	56	63	70	V
Maximum DC blocking voltage	V _{DC}	50	60	70	80	90	100	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 +150						°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°C unless otherwise noted)									
Parameter	Symbol	Test Conditions	SL55C	SL56C	SL57C	SL58C	SL59C	SL510C	Unit
Forward Drop Voltage	V _F	I _F =5A	0.60		0.70				V
Reverse leakage current @V _R	I _R	T _J =25°C	0.5		0.05				mA
		T _J =100°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)

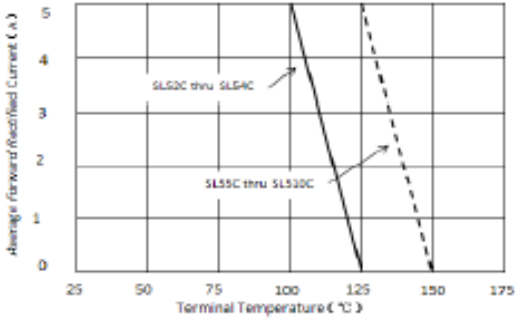


Figure 1. Forward Current Derating Curve

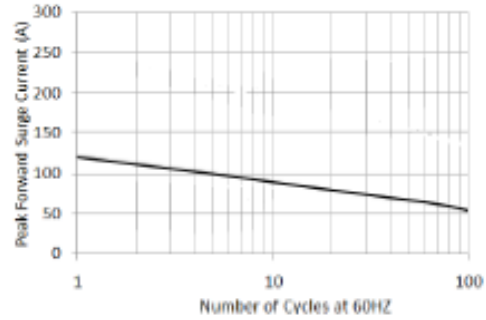


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

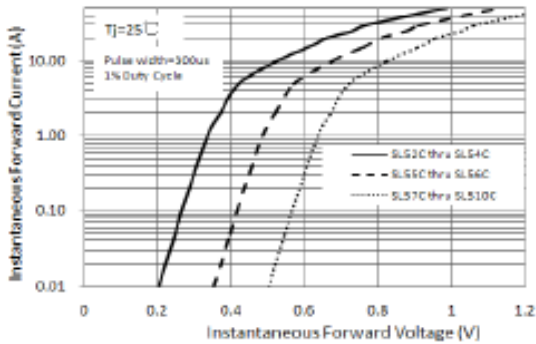


Figure 3. Typical Reverse Characteristics

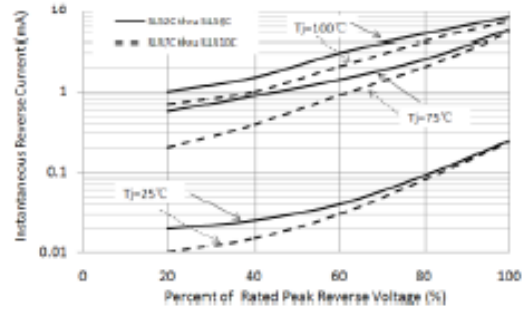


Figure 4. Typical Instantaneous Forward Characteristics

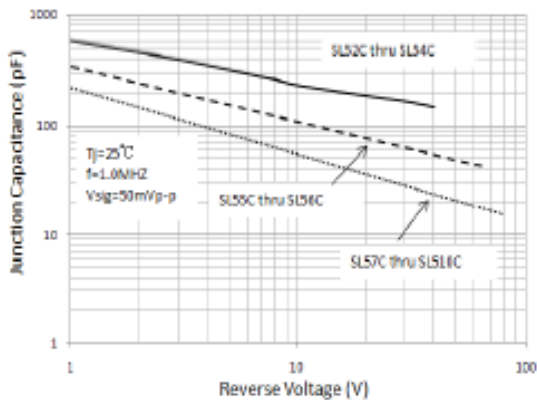
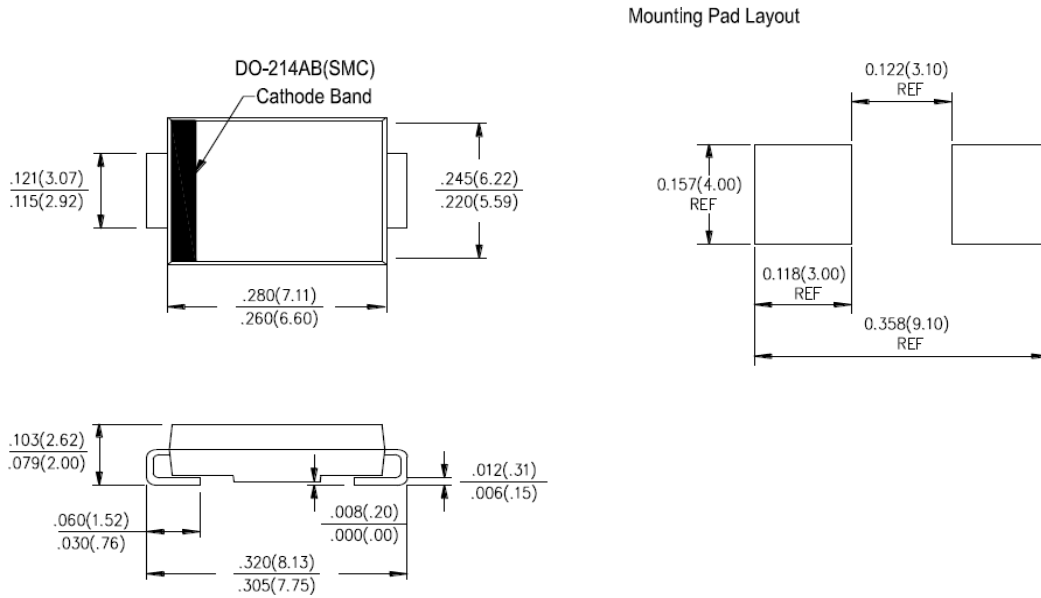


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

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Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.23	Modify document format

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