

SL12A thru SL110A

Surface Mount Schottky Rectifiers
 Reverse Voltage 20-100V Forward Current 1A

Features

- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Ideal for automated placement
- Meets environmental standard MIL-S-19500D
- Solder dip 275 °C, 10s



Package: DO-214AC (SMA)

Applications

For use in general purpose rectification of lighting, power supply, inverter, converter and freewheeling diodes for consumer, automotive and telecommunication.



Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SL12A	SL13A	SL14A	SL15A	SL16A	SL17A	SL18A	SL19A	SL110A	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)}	1									A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	45									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_A = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	SL12A	SL13A	SL14A	SL15A	SL16A	SL17A	SL18A	SL19A	SL110A	Unit
Maximum Instantaneous Forward Voltage	I _F =1 A	V _F	0.42			0.50		0.68				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.2									mA
	T _A =100°C		10									
Typical Junction Capacitance	4.0 V, 1 MHz	C _J						85				pF
Maximum Thermal Resistance		R _{θJA} ¹						80				°C/W
		R _{θJT} ²						16				°C/W

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

(2) Thermal resistance from junction to terminal, 0.197 × 0.197 inch (5.0 × 5.0mm) copper pads to each terminal

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

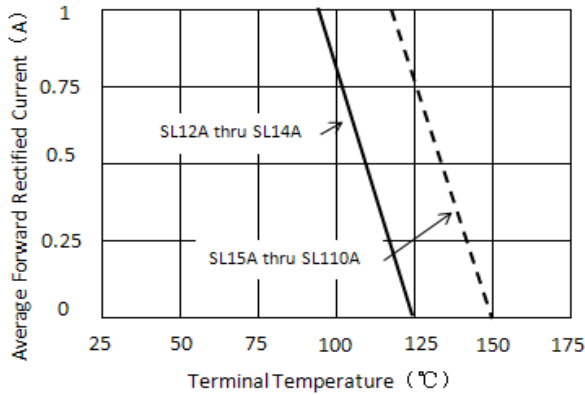


Figure 1. Forward Current Derating Curve



Figure 2. Maximum Non-repetitive Peak Forward Surge Current

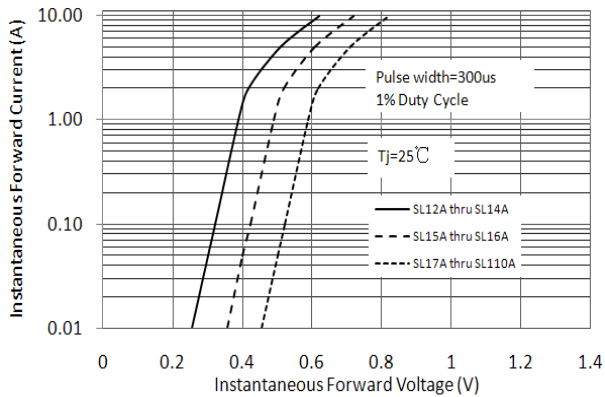


Figure 3. Typical Instantaneous Forward Characteristics

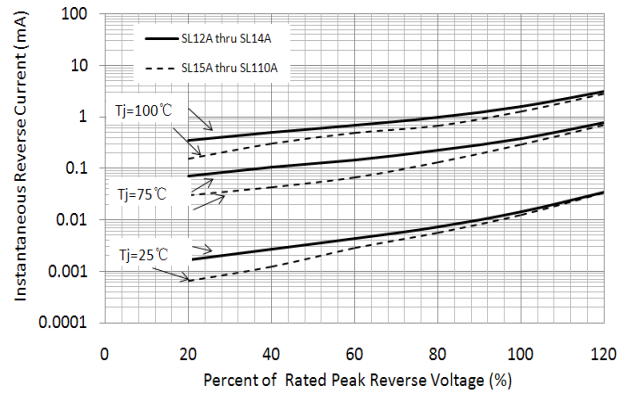


Figure 4. Typical Reverse Characteristics

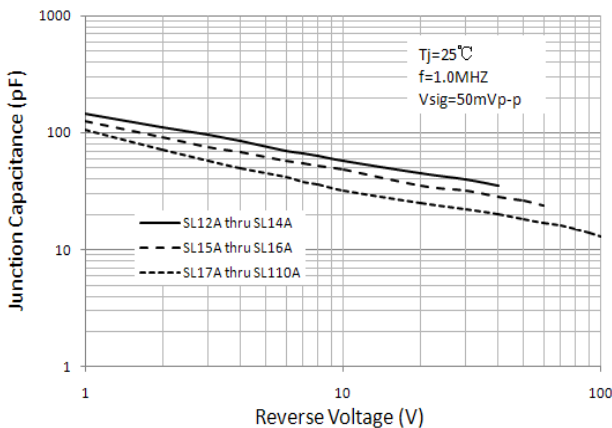
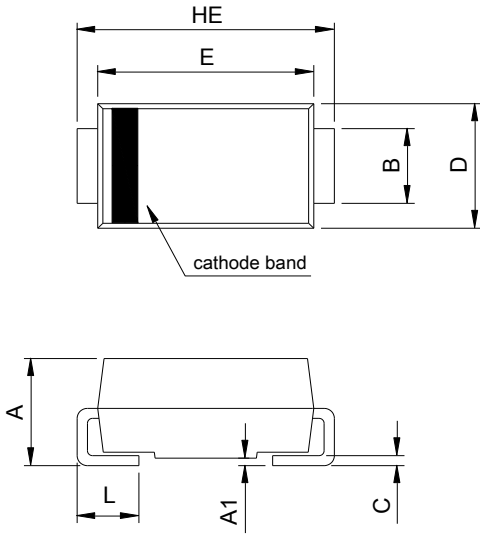


Figure 5. Typical Junction Capacitance

SL12A thru SL110A

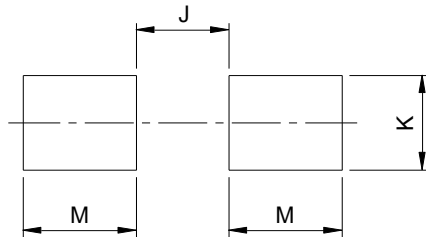
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Package Outline Dimensions SMA(DO-214AC)



DIM	SMA (DO-214AC)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

Recommended Pad Layout



DIM	Recommended Pad Layout (Reference ONLY)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-