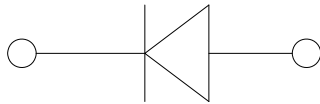
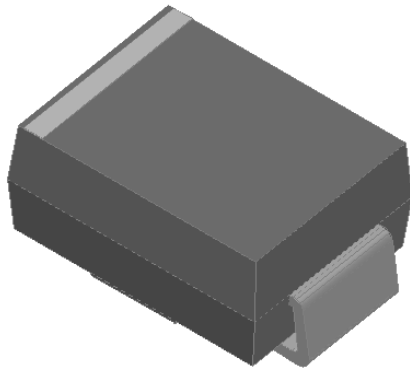


Surface Mount Schottky Rectifier



Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low V_F
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

Mechanical Data

- **Package:** DO-214AA (SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54B	SSL545B	SSL56B	SSL510B
Device marking code			SSL54B	SSL545B	SSL56B	SSL510B
Repetitive peak reverse voltage	V_{RRM}	V	40	45	60	100
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	5.0			
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	A	100			
Storage temperature	T_{stg}	$^\circ\text{C}$	-55 ~+125		-55 ~+150	
Junction temperature	T_j	$^\circ\text{C}$	-55 ~+125		-55 ~+150	

■Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SSL54B	SSL545B	SSL56B	SSL510B
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=5.0\text{A}$	0.45		0.50	0.70
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	mA	$T_a=25^\circ\text{C}$	0.5			0.1
			$T_a=100^\circ\text{C}$	50			20

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



SSL54B THRU SSL510B

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54B	SSL545B	SSL56B	SSL510B
Thermal resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	65 ¹⁾			
	$R_{\theta J-L}$		16 ¹⁾			
	$R_{\theta J-C}$		15 ¹⁾			

Note:
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics(Typical)

FIG1: I_o - T_L Curve

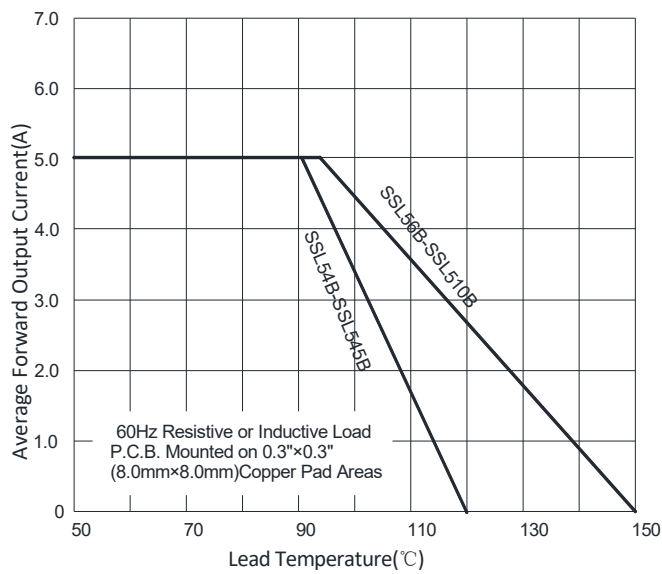


FIG.2: Forward Surge Current Capability

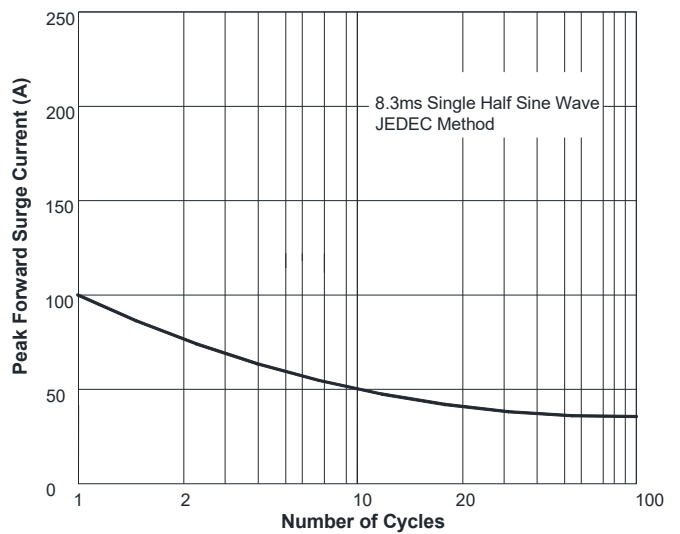


FIG3: Forward Voltage

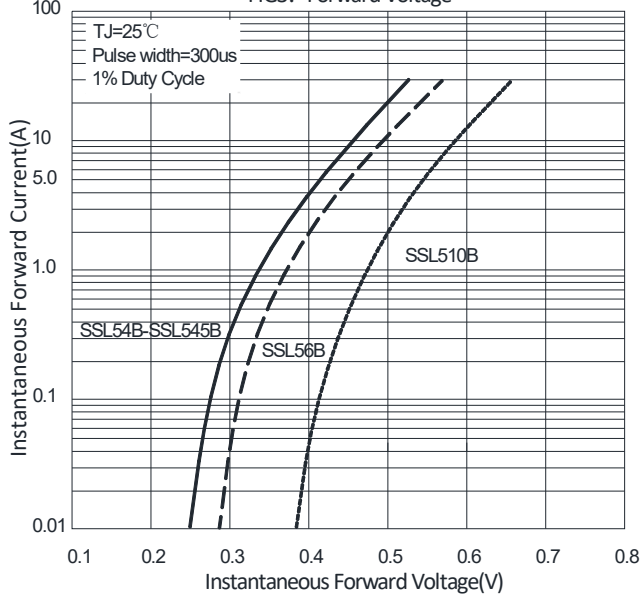
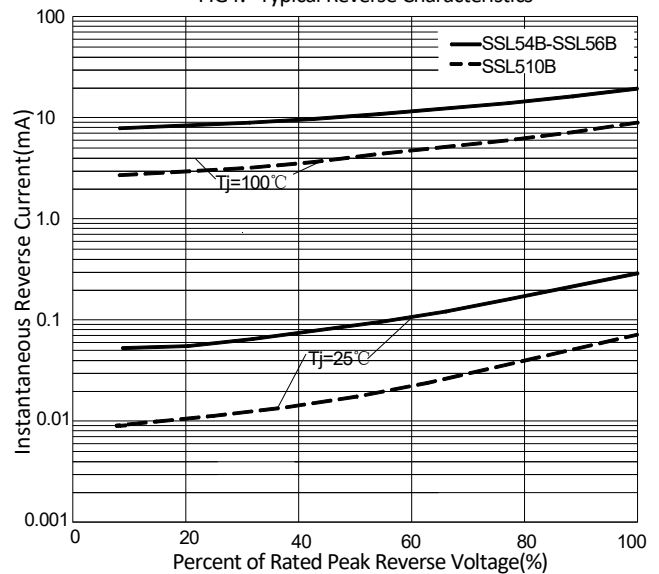


FIG4: Typical Reverse Characteristics



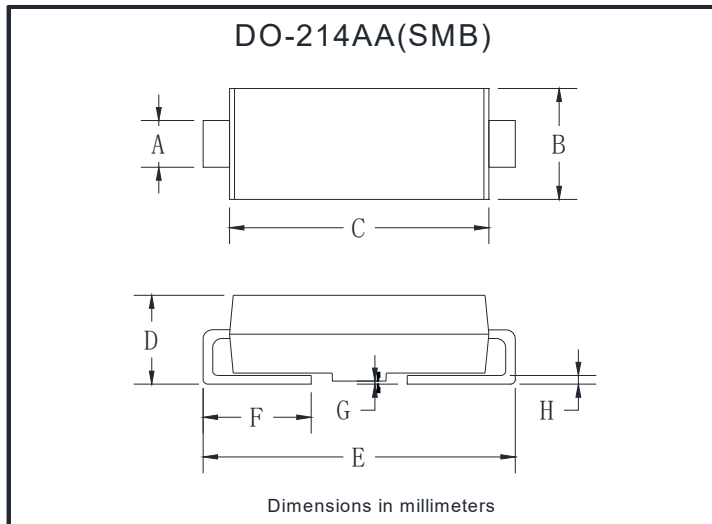


SSL54B THRU SSL510B

■ Ordering Information (Example)

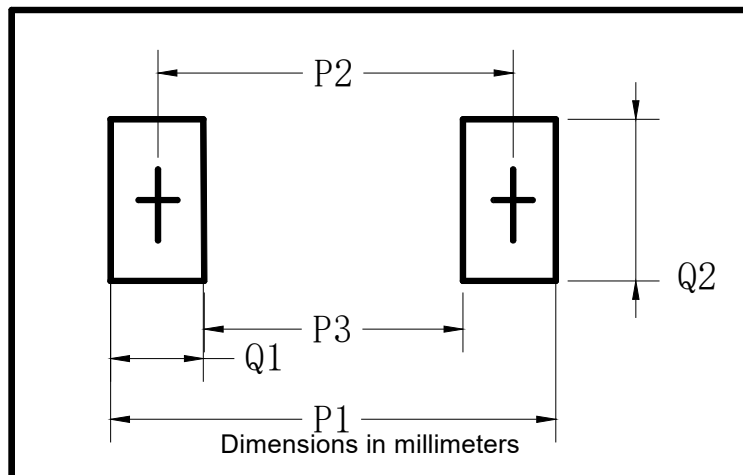
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SSL54B-SSL510B	F1	Approximate 0.096	3000	/	48000	13" reel
SSL54B-SSL510B	F2	Approximate 0.096	750	3000	24000	7" reel
SSL54B-SSL510B	F3	Approximate 0.096	500	2000	16000	7" reel

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.05	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



SSL54B THRU SSL510B

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