

### FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low VF
- 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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54B	SSL545B	SSL56B	SSL510B
Device marking code			SSL54B	SSL545B	SSL56B	SSL510B
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	40	45	60	100
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I <sub>o</sub>	A	5.0			
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, Ta=25°C	I <sub>FSM</sub>	A	100			
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150			
Junction temperature	T <sub>j</sub>	°C	-55 ~+150			

### ELECTRICAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SSL54B	SSL545B	SSL56B	SSL510B
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =5.0A	0.45		0.50	0.70
Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>RRM</sub>	mA	Ta=25°C	0.5		0.1	
			Ta=100°C	50		20	

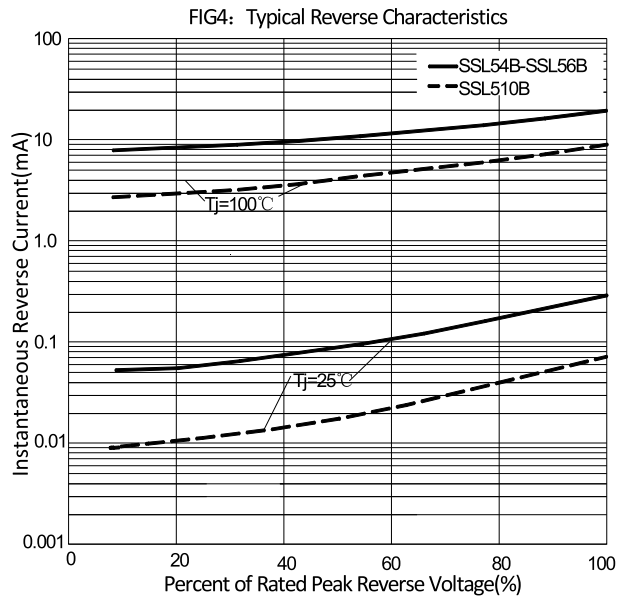
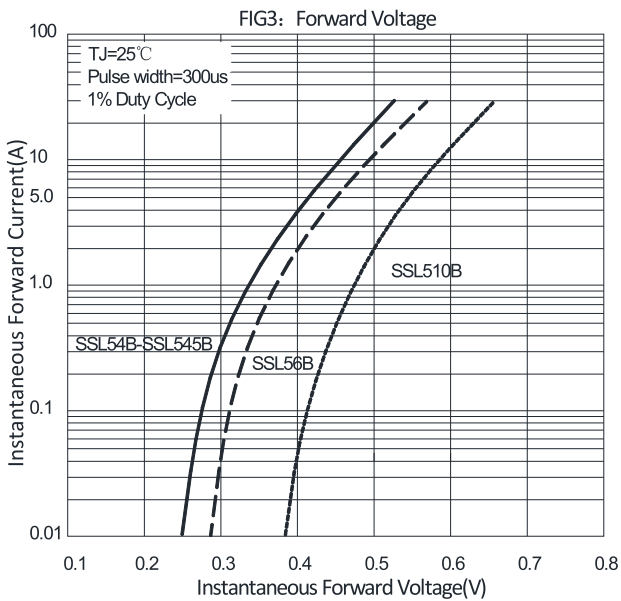
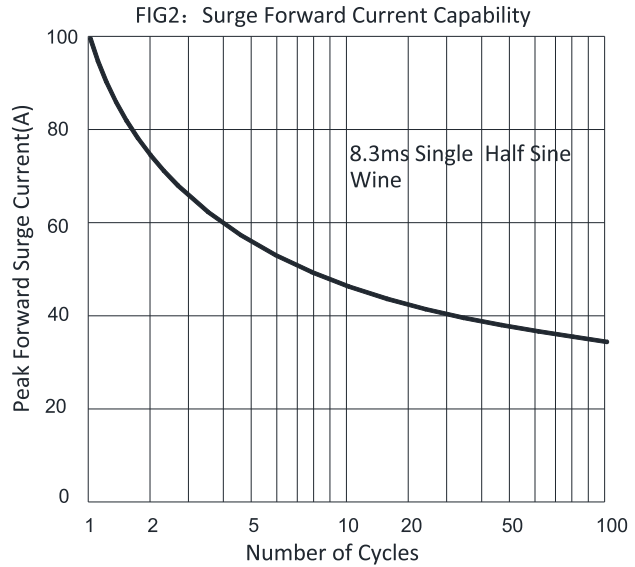
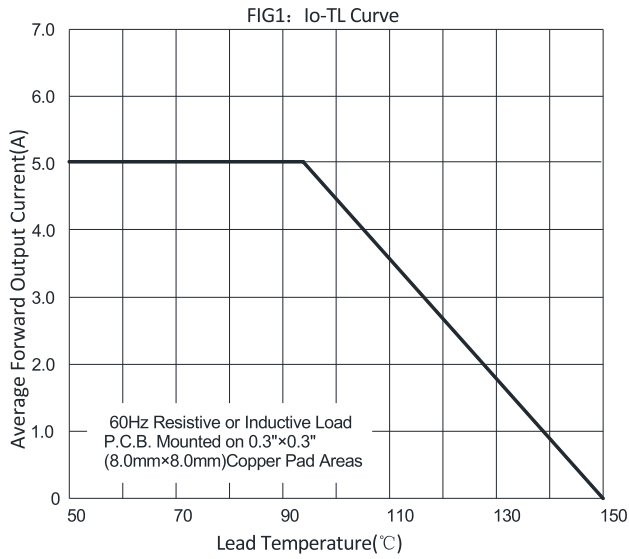
### THERMAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54B	SSL545B	SSL56B	SSL510B
Thermal resistance	R <sub>θJ-A</sub>	°C/W	65 <sup>1)</sup>			
	R <sub>θJ-L</sub>		16 <sup>1)</sup>			
	R <sub>θJ-C</sub>		15 <sup>1)</sup>			

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

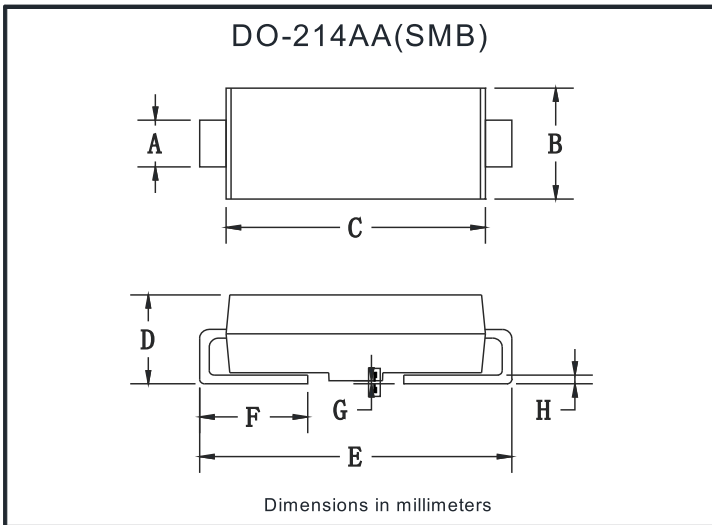
■ **CHARACTERISTICS (TYPICAL)**



■ **PACKAGING INFORMATION**

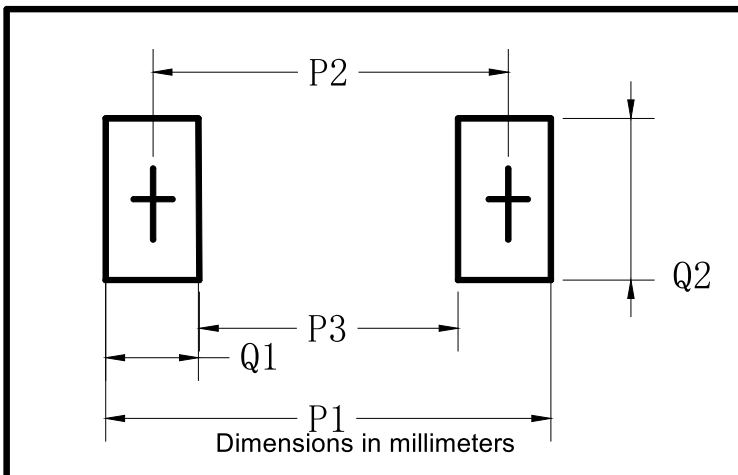
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SSL54B-SSL510B	F1	Approximate 0.096	3000	6000	48000	13" reel
SSL54B-SSL510B	F2	Approximate 0.096	750	3000	24000	7" reel
SSL54B-SSL510B	F3	Approximate 0.096	500	2000	16000	7" 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	0.10	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