

■ **FEATURES**

- Guardring for overvoltage protection
- Low forward voltage drop, Low power losses
- High forward surge capability
- High frequency operation
- Solder dip 260 °C max. 10 s, per JESD 22-B106

■ **TYPICAL APPLICATIONS**

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

■ **MECHANICAL DATA**

- Package : DO-214AB (SMC)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals : Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes the cathode end

■ **MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54	SSL56	SSL510
Device marking code			SSL54	SSL56	SSL510
Repetitive Peak Reverse Voltage	VRRM	V	40	60	100
Average Rectified Output Current @60Hz sine wave, Resistance load, $T_a$ (FIG.1)	IO	A	5.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_a=25$	IFSM	A	100		
Storage Temperature	Tstg	°C	-55 ~+150		
Junction Temperature	Tj	°C	-55 ~+125	-55 ~+150	

■ **ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SSL54	SSL56	SSL510
Maximum instantaneous forward voltage drop per diode	$V_F$	V	IFM=5.0A	0.45	0.5	0.7
Maximum DC reverse current at rated DC blocking voltage per diode	$I_R$	mA	$T_a=25^{\circ}\text{C}$	0.5		
			$T_a=100^{\circ}\text{C}$	50		
Typical junction capacitance	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	330	220	680

■ **THERMAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	SSL54	SSL56	SSL510
Thermal Resistance	Junction to ambient	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	47 <sup>(1)</sup>		
	Junction to lead	$R_{\theta J-L}$	$^{\circ}\text{C}/\text{W}$	13 <sup>(1)</sup>		

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pc s)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SSL54~SSL510	F1	Approximate 0.252	3000	6000	42000	13" reel

■ **CHARACTERISTICS (TYPICAL)**

FIG.1: Io-TL Curve

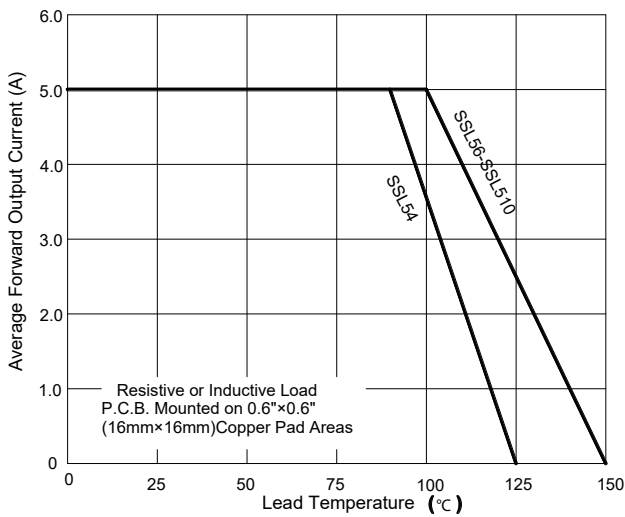


FIG.2: Forward Surge Current Capability

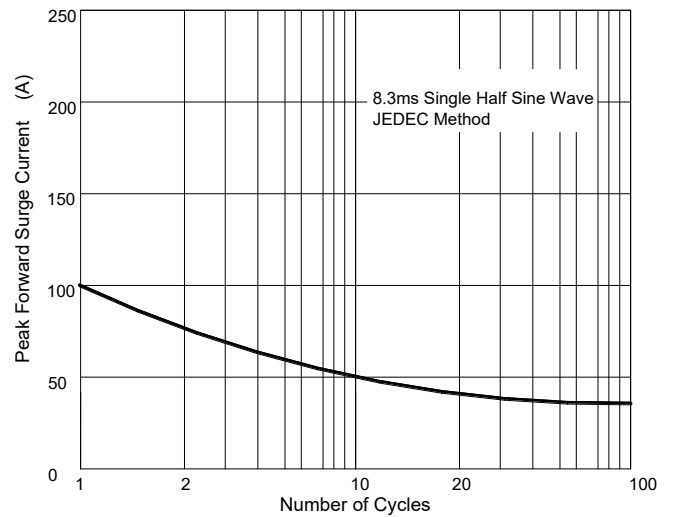


FIG.3: Forward Voltage

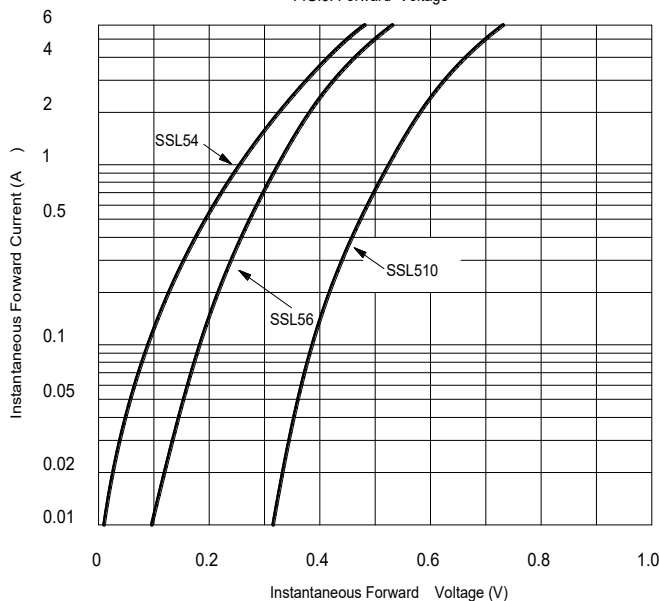
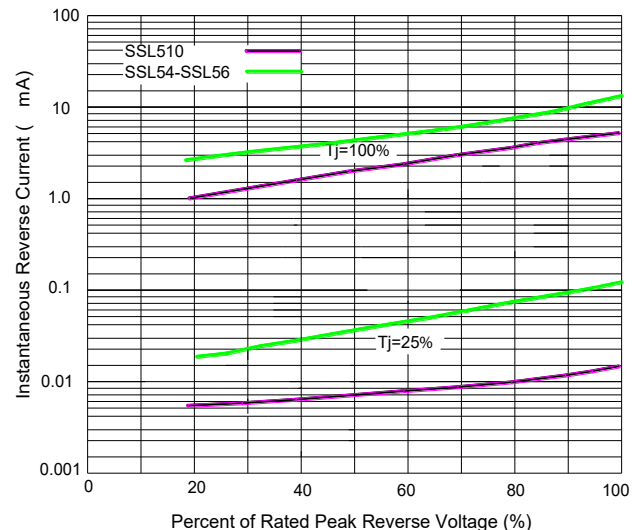
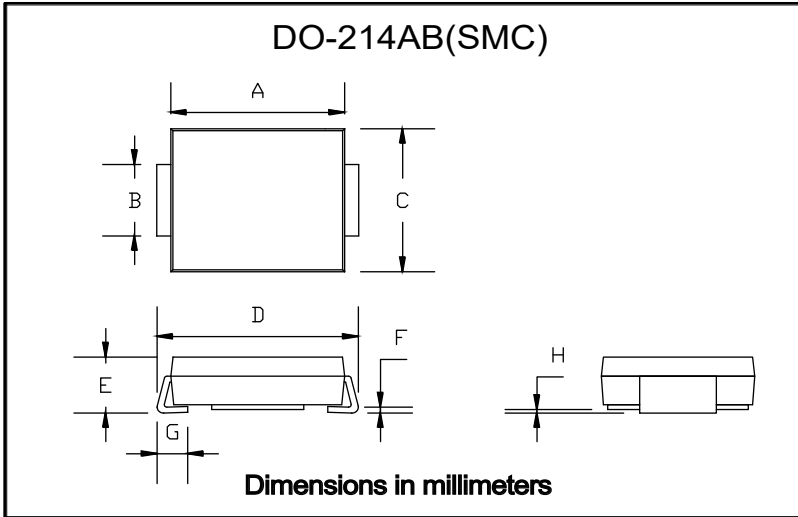


FIG.4: Typical Reverse Characteristics

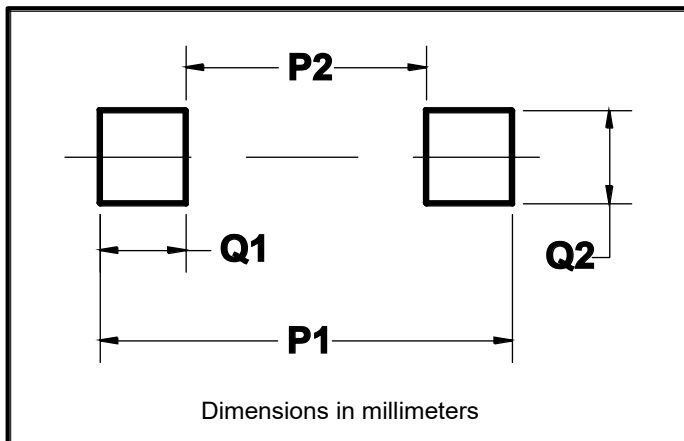


■ **OUTLINE DIMENSIONS**



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.10	0.20

■ **SUGGESTED PAD LAYOUT**



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82