

#### **DO-214AA (SMB)**



### Voltage Current 20 V to 150 V 1.0 A

#### **FEATURES**

- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- High surge current capability
- Guarding for overvoltage protection
- Low forward voltage drop
- Solder dip 260°C, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU
  and WEEE 2002/06/EC
- and WEEE 2002/96/EC

   Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C

#### **MECHANICAL DATA**

- Case: DO-214AA (SMB). Epoxy meets UL 94V-0 flammability rating.
- Polarity: Color band denotes cathode end.
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test

#### **TYPICAL APPLICATIONS**

Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

## Maximum Ratings and Electrical Characteristics at 25 °C

		SK 12B	SK 13B	SK 14B	SK 15B	SK 16B	SK 19B	SK 110B	SK 115B
	Marking code	l1	12	13	14	15	16	17	18
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40	50	60	90	100	150
V <sub>RMS</sub>	Maximum RMS Voltage (V)	14	21	28	35	42	63	70	105
$V_{DC}$	Maximum DC Blocking Voltage (V)	20	30	40	50	60	90	100	150
I <sub>F(AV)</sub>	Maximum Average Forward Rectified Current at T <sub>L</sub> (See graphic)	1.0 A							
I <sub>FSM</sub>	8.3 ms.Peak Forward Surge Current (Jedec Method)	30 A							
Tj	Operating Temperature Range	-55°C to +125°C -55°C to +150°C							
T <sub>stg</sub>	Storage Temperature Range	-55°C to +150°C							

## Electrical Characteristics at Tamb = 25 °C

V <sub>F</sub>	Maximum Instantaneous Forward Voltage @ 1.0 A	0.5 V	0.75 V	0.85 V	0.95 V	
	Maximum DC Reverse Current (Note 1) T <sub>A</sub> = 25 °C	0.5 mA	0.1 mA			
I <sub>R</sub>	at Rated DC Blocking Voltage T <sub>A</sub> =100°C	10 mA	5.0 mA			
	$T_A = 125$ °C			2.0 mA		
C <sub>j</sub>	Typical Junction Capacitance (Note 2)		110 pF			
R <sub>thj-l</sub>	Typical Thermal Resistance (Note 3)	ermal Resistance (Note 3) 25 °C/W				

NOTES: 1. Pulse Test With PW = 300 µsec, 1% Duty Cycle

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

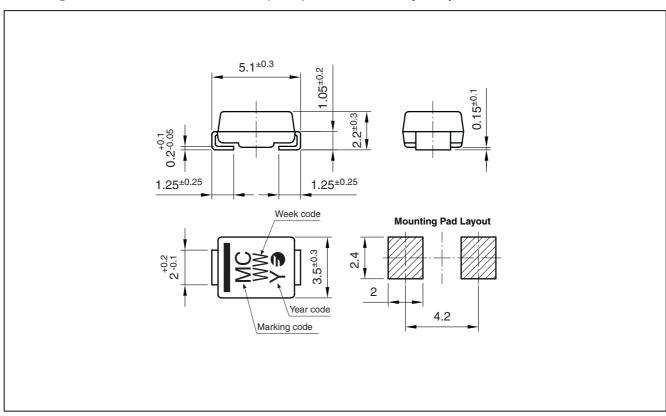
3. Measured on P.C. Board with 10mm x10mm Copper Pad Areas



# **Ordering information**

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
SK110B TRTB	TRTB	13" diameter tape and reel	3,000	0.0823
SK110B TRTS	TRTS	7" diameter tape and reel	850	0.0823

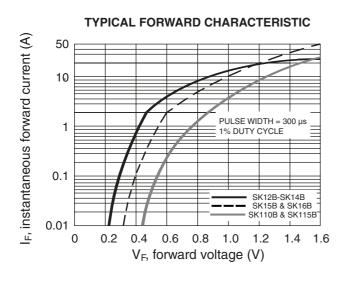
# Package Outline Dimensions: (mm) DO-214AA (SMB)



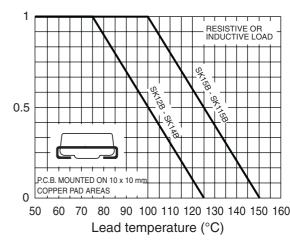


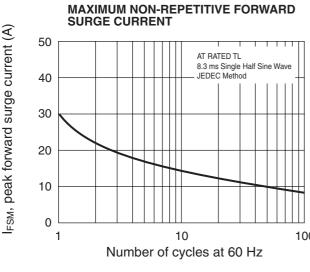
## Ratings and Characteristics (Ta 25 °C unless otherwise noted)

IF(AV), average forward Current (A)

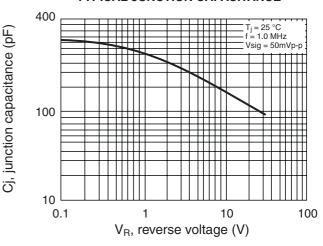


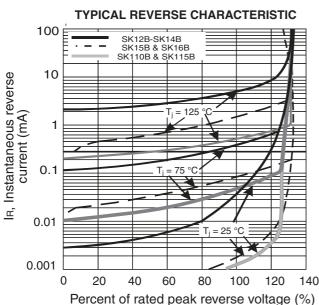
# MAXIMUM FORWARD CURRENT DERATING CURVE



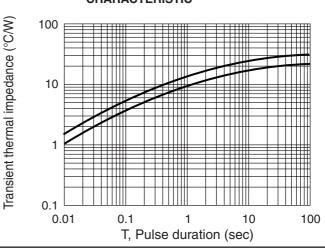


#### TYPICAL JUNCTION CAPACITANCE





# TYPICAL TRANSIENT THERMAL CHARACTERISTIC





### **Revision History**

Date	Revision	Description of Changes
11-Mar-2011	0	Original Data Sheet
28-Oct-2016 1		Format update

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