

SK102B THRU SK1010B

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SMB Surface Mount Schottky Barrier Rectifier

Features

- For surface mounted applications
- High forward surge current capability
- Low power loss, high efficiency
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-100 V
Forward Current
10 Ampere

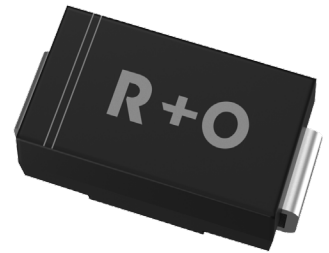
Applications

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

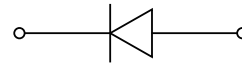
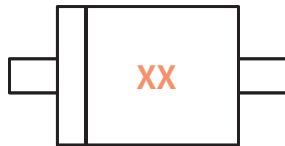
Mechanical Data

- Case: DO-214AA(SMB)
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

DO-214AA(SMB)



Function Diagram



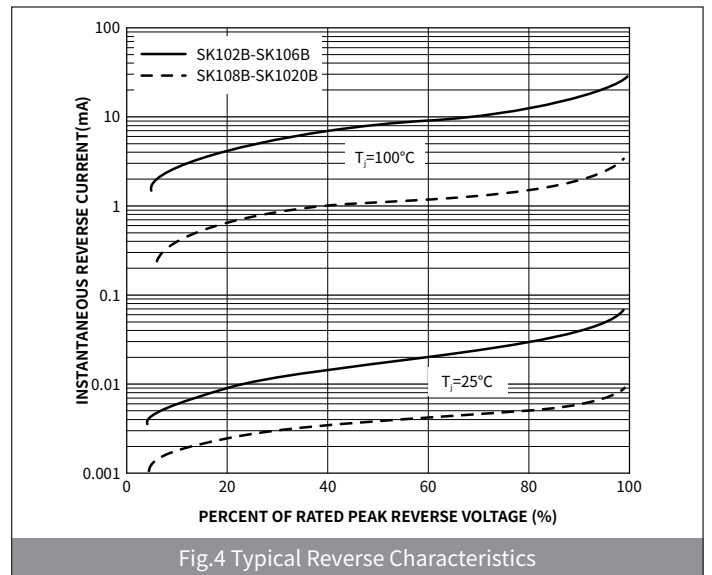
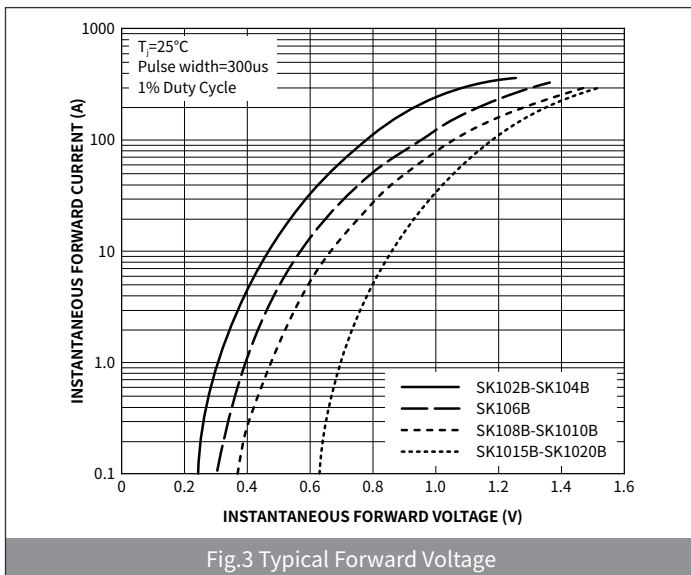
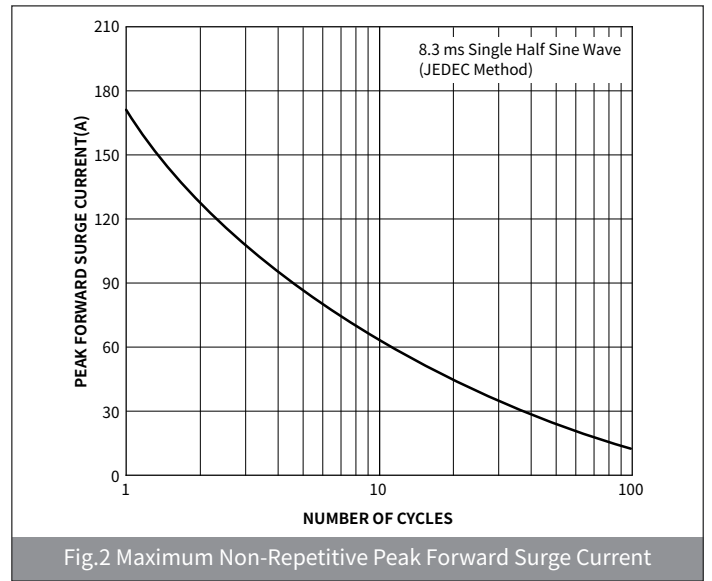
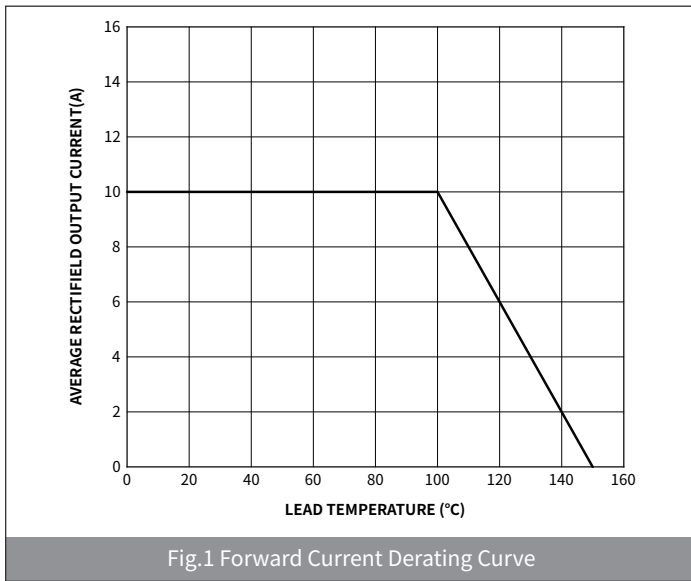
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SK102B	SK104B	SK1045B	SK106B	SK108B	SK1010B	SK1015B	SK1020B
Device marking code			SK102B	SK104B	SK1045B	SK106B	SK108B	SK1010B	SK1015B	SK1020B
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	45	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	28	32	42	56	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	20	40	45	60	80	100	150	200
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	10							
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	250							
Storage temperature	T_{stg}	°C	-55 ~ +150							
Junction temperature	T_j	°C	-55 ~ +150							
Typical Thermal Resistance	$R_{\theta J-A}$	°C/W	18							
	$R_{\theta J-L}$	°C/W	15							

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SK102B	SK104B	SK1045B	SK106B	SK108B	SK1010B	SK1015B	SK1020B
Maximum instantaneous forward voltage	$I_F=10A$	V_F	V		0.55		0.70		0.85		0.92
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	mA	0.1				0.02			
	$V_R=V_{DC}, T_A=100^\circ C$	I_{R2}		5.0				2.0			
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	400							

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



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SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMB	R3	0.098	3000	6000	48000	13"

● Package Outline Dimensions (SMB/DO-214AA)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.85	2.21	0.073	0.087
B	4.25	4.85	0.167	0.191
C	3.30	3.94	0.130	0.155
D	2.15	2.65	0.085	0.104
E	0.75	1.52	0.030	0.060
F	-	0.203	-	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.31	0.006	0.012

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	2.26	-	0.089	-
J	2.10	-	0.085	-
K	-	2.74	-	0.107

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