

SMC Surface Mount Schottky Barrier Rectifier

Features

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

Reverse Voltage
20-200 V

Forward Current
10 Ampere

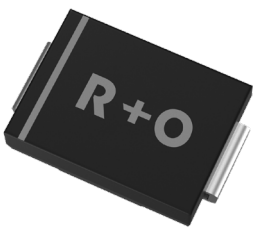
Applications

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

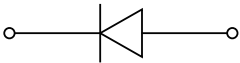
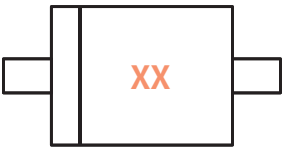
Mechanical Data

- Case: DO-214AB(SMC)
- 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-214AB(SMC)



Function Diagram



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

PARAMETER	SYMBOL	UNIT	SK102C	SK104C	SK1045C	SK106C	SK108C	SK1010C	SK1015C	SK1020C
Device marking code			SK102C	SK104C	SK1045C	SK106C	SK108C	SK1010C	SK1015C	SK1020C
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	20	40	45	60	80	100	150	200
Maximum RMS Voltage	V _{RMS}	V	14	28	31.5	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	175							
Storage temperature	T _{stg}	°C	-55 ~ +150							
Junction temperature	T _j	°C	-55 ~ +125		-55 ~ +150					
Typical Thermal Resistance	R _{θJ-A}	°C /W	47							
	R _{θJ-L}	°C /W	14							

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

PARAMETER	TEST CONDITIONS		SYMBOL	UNIT	SK102C	SK104C	SK1045C	SK106C	SK108C	SK1010C	SK1015C	SK1020C
Maximum instantaneous forward voltage	I _F =10A		V _F	V	0.55			0.70	0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage	V _{RM} =V _{DC}	Ta=25°C	I _R	mA	0.5			0.05				
		Ta=125°C			50			10				
Typical junction capacitance	4.0V DC,1MHz		C _J	pF	500							

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

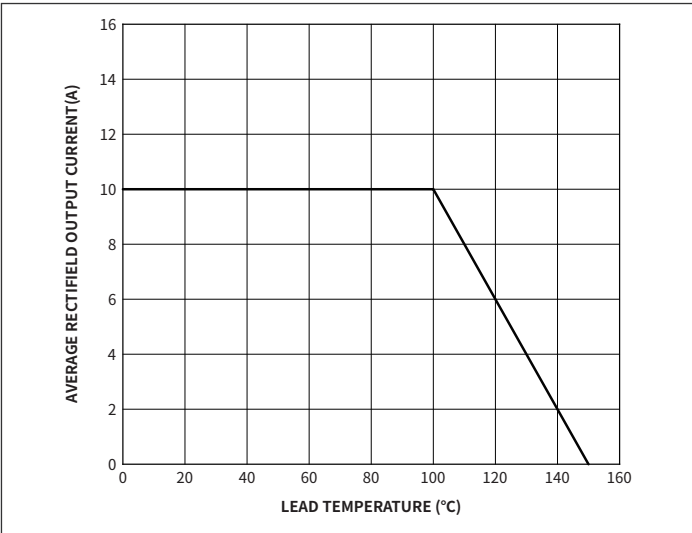


Fig.1 Forward Current Derating Curve

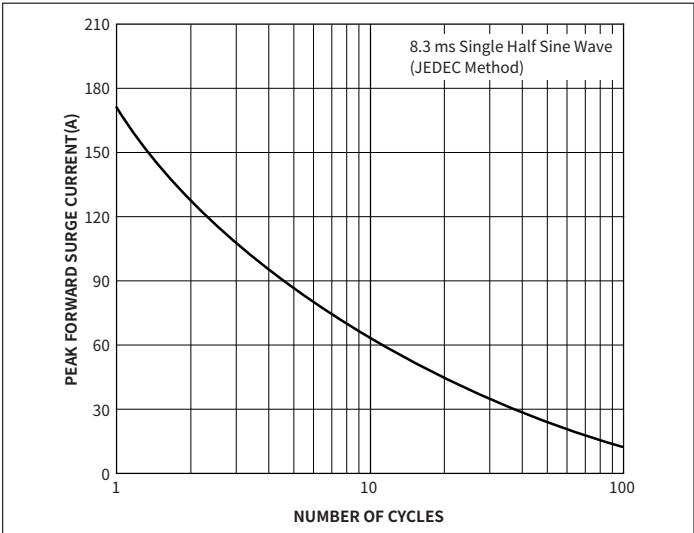


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

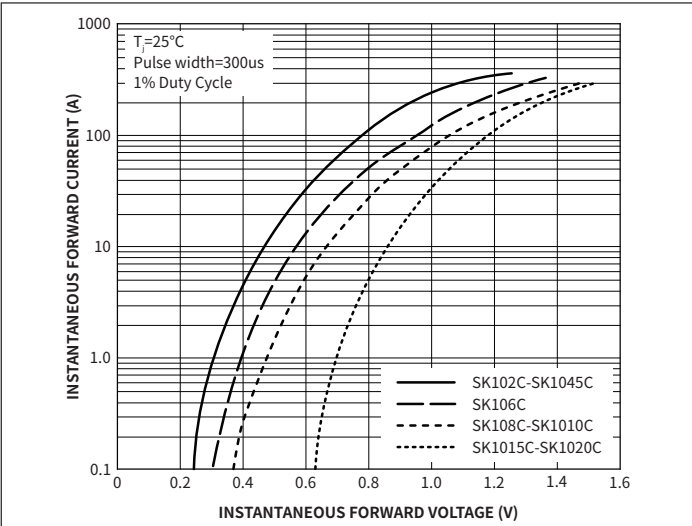


Fig.3 Typical Forward Voltage

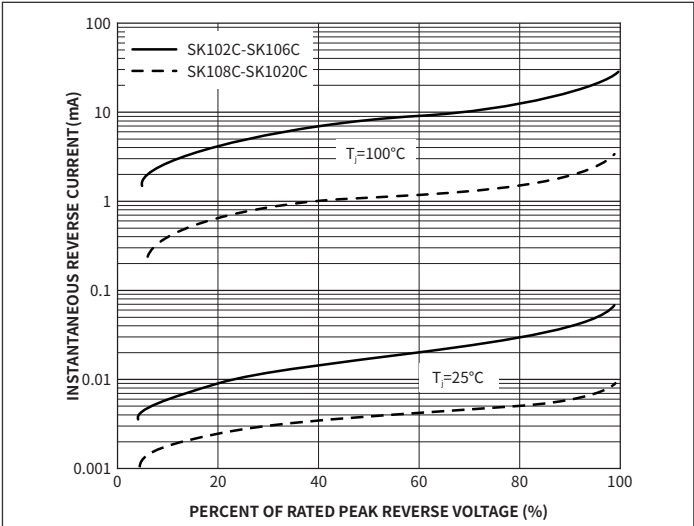


Fig.4 Typical Reverse Characteristics

SK102C THRU SK1020C

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMC	R3	0.257	3000	6000	48000	13"

● Package Outline Dimensions (SMC/DO-214AB)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.85	3.27	0.112	0.129
B	6.60	7.11	0.261	0.281
C	5.59	6.22	0.221	0.246
D	1.99	2.61	0.078	0.103
E	0.76	1.52	0.030	0.060
F	-	0.20	-	0.008
G	7.75	8.13	0.306	0.321
H	0.15	0.31	0.006	0.012

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	3.82	-	0.151	-
J	3.03	-	0.120	-
K	-	3.84	-	0.152