

## SMC Surface Mount High Efficient Rectifier

### ● Features

- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

**Reverse Voltage**  
50-1000 V  
**Forward Current**  
8 Ampere

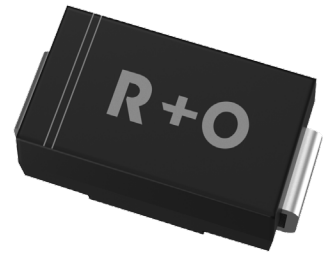
### ● Applications

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

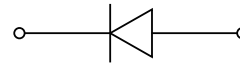
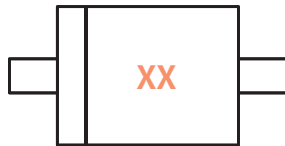
### ● Mechanical Data

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



### ● Function Diagram



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

PARAMETER	SYMBOL	UNIT	US8AC	US8BC	US8DC	US8GC	US8JC	US8KC	US8MC
Maximum repetitive peak reverse voltage	$V_{RRM}$	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	$V_{RMS}$	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	$V_{DC}$	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @60Hz sine wave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	8.0						
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 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	47						
	$R_{\theta J-L}$	°C /W	15						

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	US8AC	US8BC	US8DC	US8GC	US8JC	US8KC	US8MC
Maximum instantaneous forward voltage	$I_F=8.0A$	$V_F$	V	1.0		1.4		1.7		
Maximum reverse recovery time	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	$T_{rr}$	ns	50					75	
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	$I_{R1}$	uA	2.0						
	$V_R=V_{DC}, T_A=100^\circ C$	$I_{R2}$		200						
Typical junction capacitance	4.0V DC, 1MHz	$C_J$	pF	85						

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

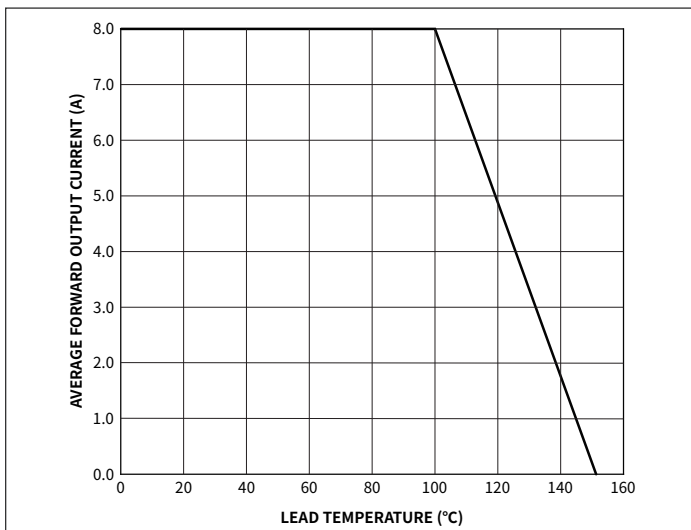


Fig.1 Forward Current Derating Curve

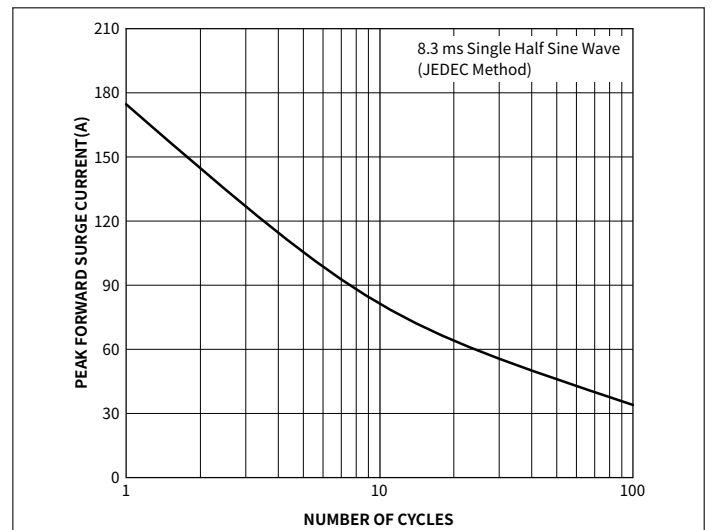


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

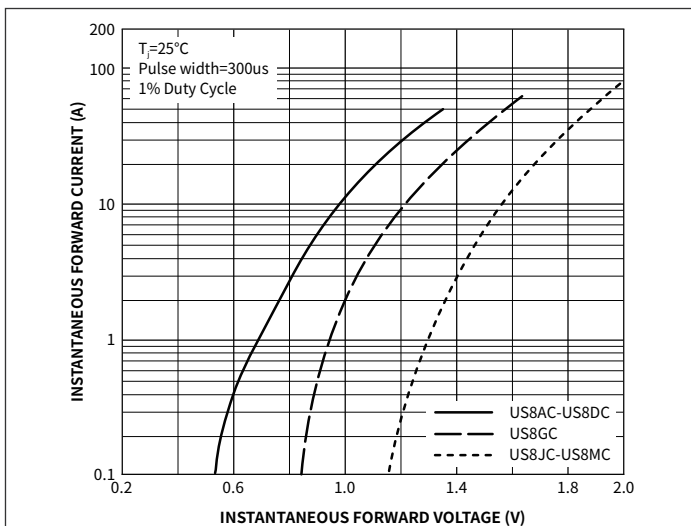


Fig.3 Typical Forward Voltage

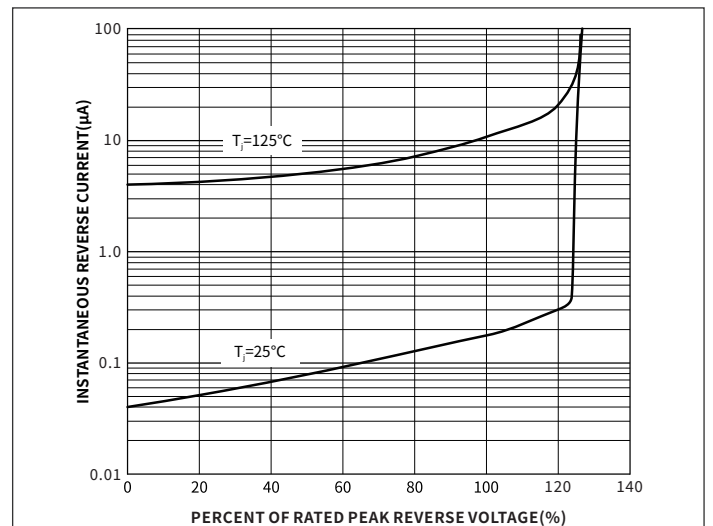


Fig.4 Typical Reverse Characteristics

## ● 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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Rectifiers](#) category:*

*Click to view products by [hongjiacheng](#) manufacturer:*

Other Similar products are found below :

[70HFR40](#) [FR105 R0](#) [RL252-TP](#) [1N5397](#) [JANTX1N5634A](#) [1N4005-TR](#) [1N4007-BP](#) [UFS120Je3/TR13](#) [20ETS12S](#) [RRE02VS6SGTR](#)  
[MS306](#) [A1N5404G-G](#) [CRF02\(T5L,TEMQ\)](#) [ACGRB207-HF](#) [CLH07\(TE16L,Q\)](#) [CLH03\(TE16L,Q\)](#) [1N5395-TP](#) [UES1302](#) [ACGRC307-HF](#)  
[ACEFC304-HF](#) [DZ-1380](#) [85HFR60](#) [40HFR60](#) [70HF120](#) [85HFR80](#) [SCF7500](#) [SM100](#) [ACGRA4001-HF](#) [SKN70/08](#) [SKR70/08](#) [NTE5819](#)  
[NTE5827](#) [NTE5828](#) [NTE5911](#) [NTE5915](#) [NTE6104](#) [NTE6163](#) [NTE6164](#) [NTE6165](#) [NTE6364](#) [TSD3G](#) [SET130312](#) [NRVUS110VT3G](#)  
[UES1106](#) [UES1306](#) [NRVUS240VT3G](#) [D5FE60-5063](#) [R4000GPS-TP](#) [D4015L56TP](#) [UES1306HR2](#)