

OM SENI

SMC Surface Mount High Efficient Rectifier

Features

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

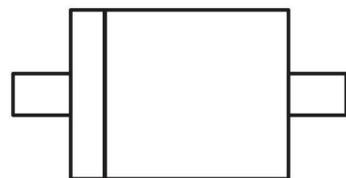
Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication

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

Function Diagram



US3AC THRU US3MC

Reverse Voltage
50-1000 V

Forward Current
3 Ampere



DO-214AB (SMC)

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

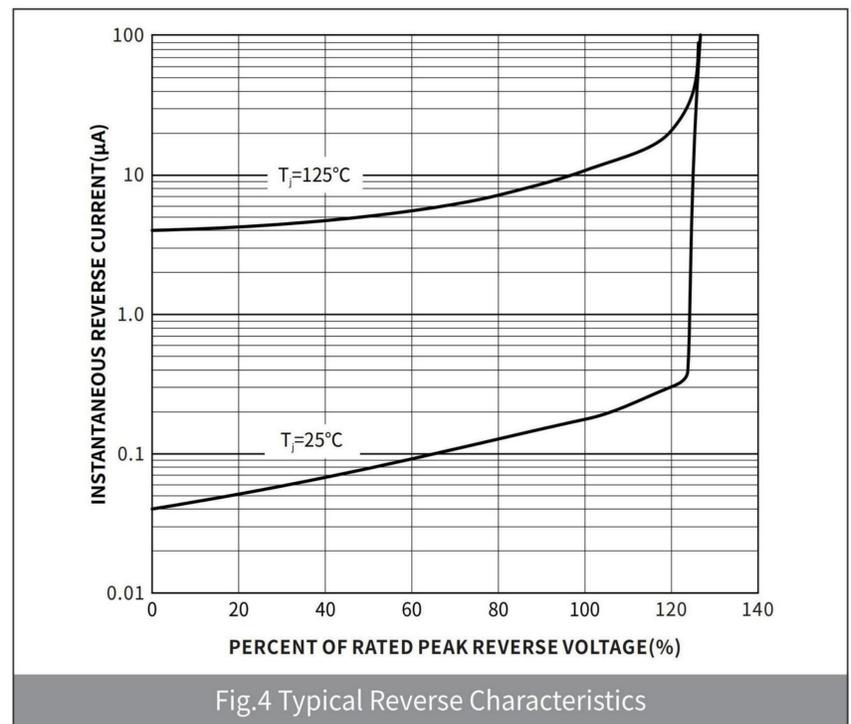
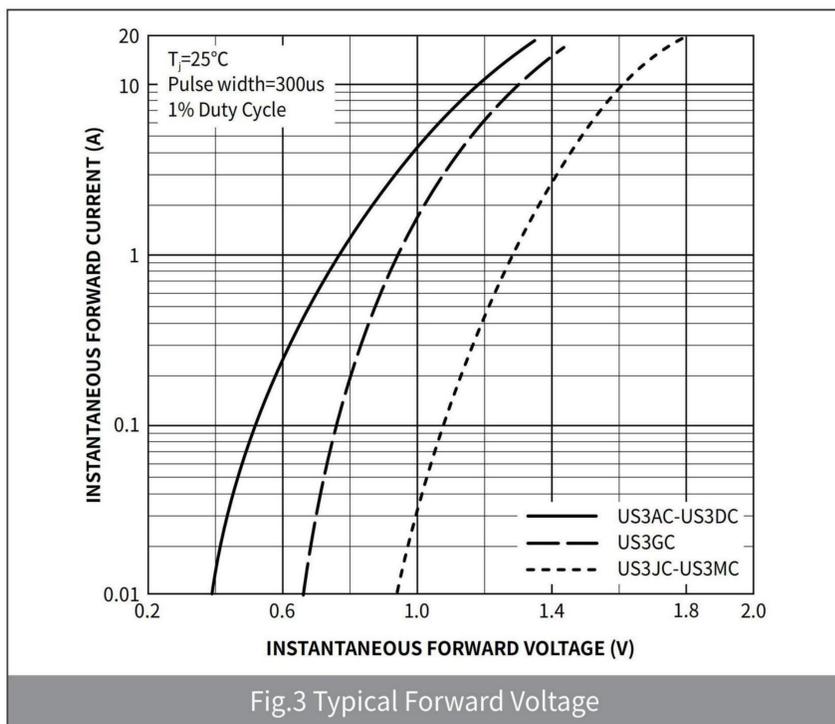
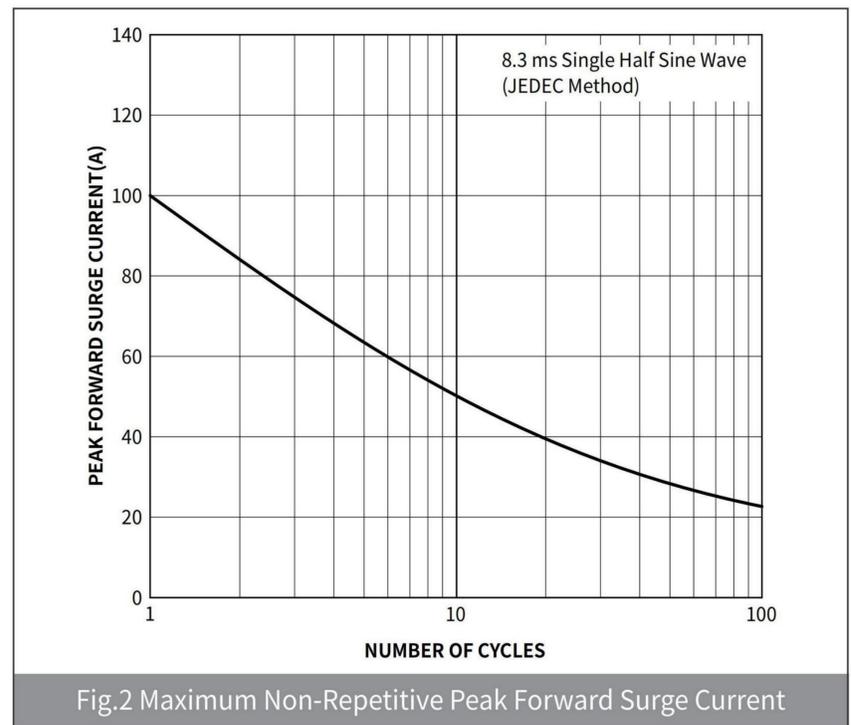
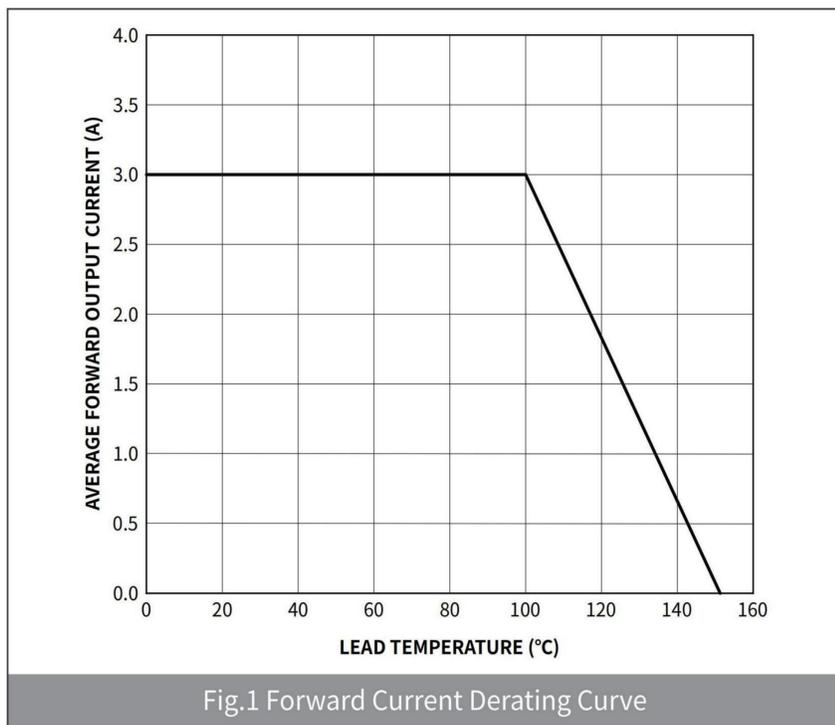
PARAMETER	SYMBOL	UNIT	US3AC	US3BC	US3DC	US3GC	US3JC	US3KC	US3MC
Device marking code			US3AC	US3BC	US3DC	US3GC	US3JC	US3KC	US3MC
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	3.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	100						
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						

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	US3AC	US3BC	US3DC	US3GC	US3JC	US3KC	US3MC
Maximum instantaneous forward voltage	$I_F=3.0A$	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}	μA	2.0						
	$V_R=V_{DC}, T_A=100^\circ C$	I_{R2}		200						
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	65						

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



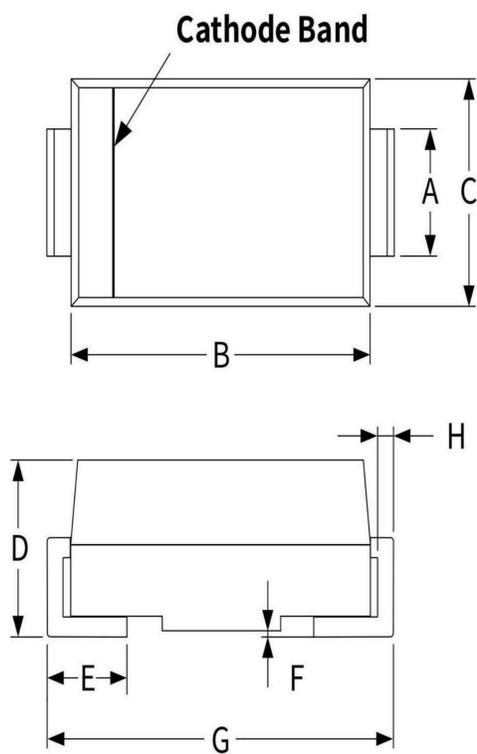
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Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMC	R3	0.257	3000	6000	30000	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

