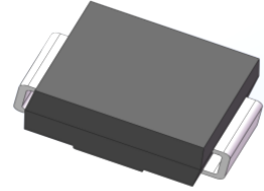


Features

- Low forward voltage drop
- Ultra-fast recovery time max 50ns
- Low Qrr and Irm reduces switching losses
- Moisture sensitivity: level 1, per J-STD-020
- Especially suited as boost diode in power factor correctors
- Qualified by AEC-Q101 standard



SMB(DO-214AA)

Typical Applications

These diodes series are designed especially for use in Power Factor Correction applications as boost diode. Ideally suited for high voltage, high frequency rectification in car inverters, lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)				
Parameter	Symbol	SMB340U	SMB360U	Unit
Maximum repetitive peak reverse voltage	VRRM	400	600	V
Maximum RMS voltage	VRMS	280	420	V
Maximum DC blocking voltage	VDC	400	600	V
Maximum average forward rectified current	IF(AV)	3.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	125		A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150		°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)					
Parameter	Test Conditions	Symbol	SMB340U	SMB360U	Unit
Maximum instantaneous forward voltage	3 A	VF	1.1	1.3	Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	IR	10		µA
	TA=125°C		300		
Maximum reverse recovery time	IF=0.5A, IR=1.0A, I _{rr} =0.25A, (RG-1)	t _{rr}	50		nS
Typical junction capacitance	4.0 V, 1 MHz	CJ	32		pF
Typical thermal resistance ¹⁾	junction to lead	R _{θJL}	10		°C/W
	junction to case	R _{θJC}	22		
	junction to ambient	R _{θJA}	35		

Notes 1): The thermal resistance from junction to lead, case and ambient, Mounted on P.C.B with 30*30mm copper pad area



SMB340U thru SMB360U

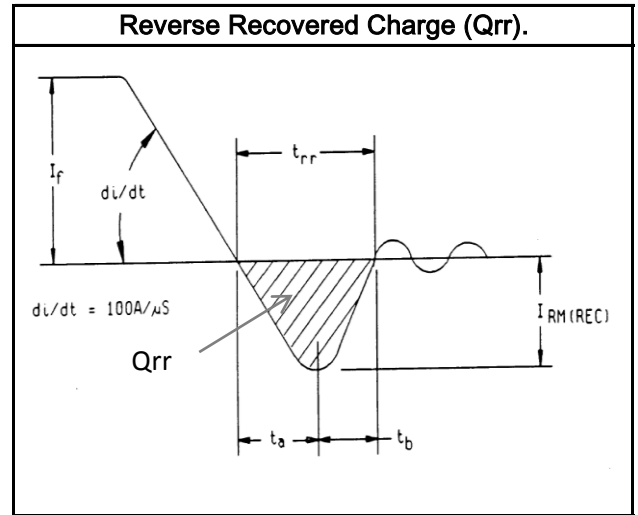
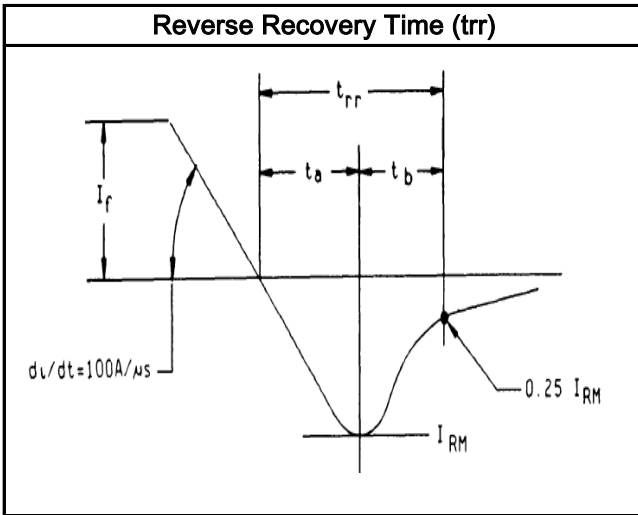
Ultra fast Boost Rectifier

Reverse Voltage 400~600V Forward Current 3A

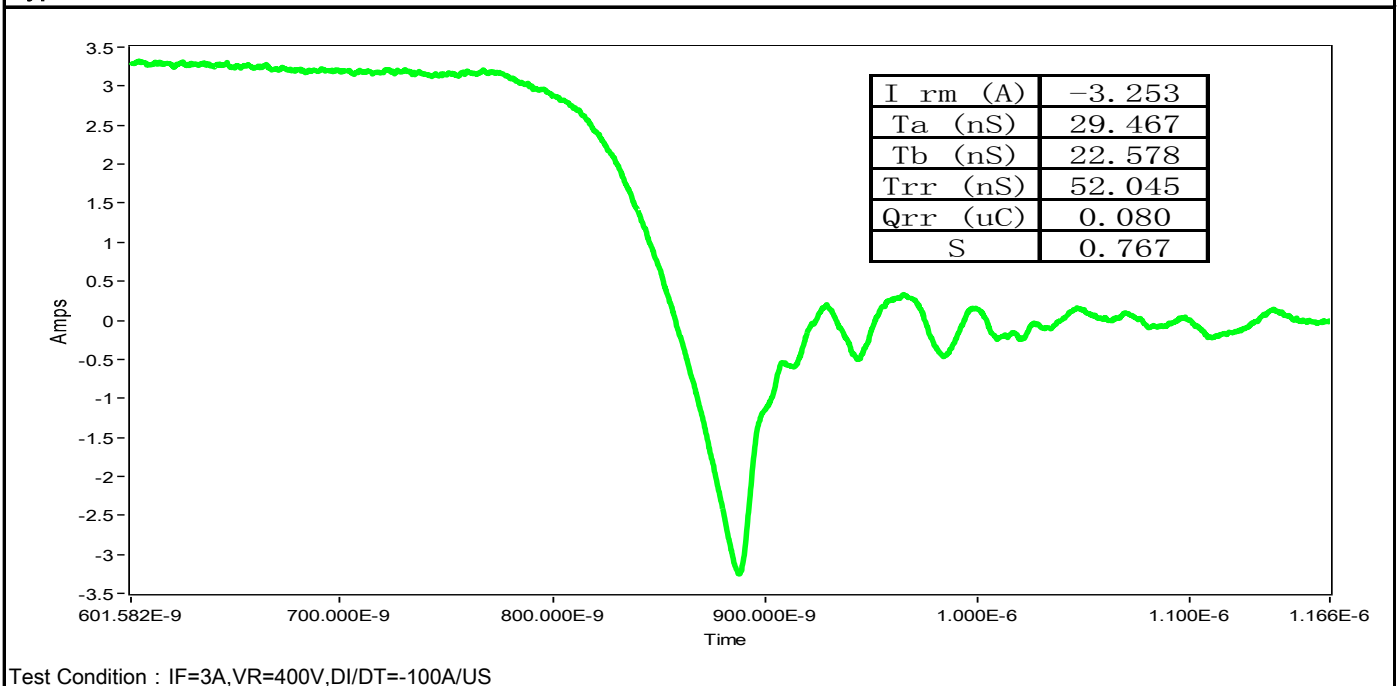
Dynamic Characteristics

(TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	Typ.	Max.	Unit
Reverse Recovery time	IF=3A, di/dt=-100A/us, VR=400V, Tj=25°C	t_{rr}	52.05	75	nS
		t_a	29.47	-	
		t_b	22.58	-	
Softness Factor		S	0.77	-	
Reverse Recovery current		I_{RM}	3.25	5	A
Reverse Recovery charges	Q _{rr}	80.00	150	nC	



Typical wave form at MIL-STD-750 condition





SMB340U thru SMB360U

Ultra fast Boost Rectifier

Reverse Voltage 400~600V Forward Current 3A

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

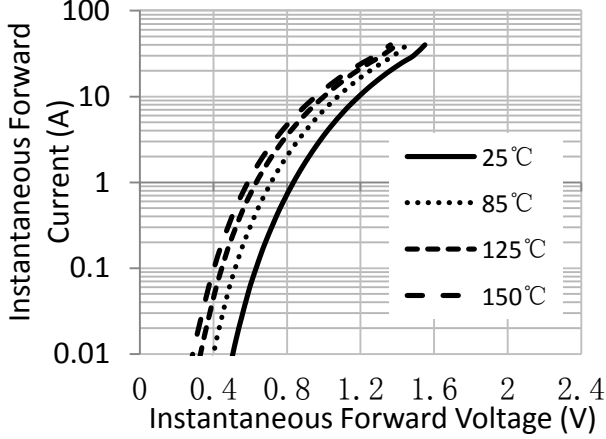


Figure 1. Typical Instantaneous Forward Characteristics (SMB340U)

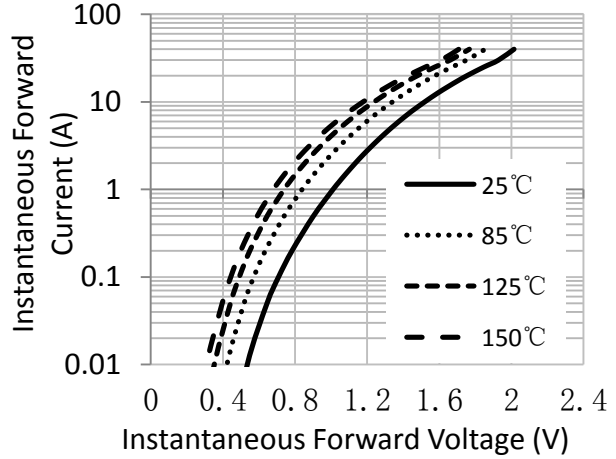


Figure 2. Typical Instantaneous Forward Characteristics (SMB360U)

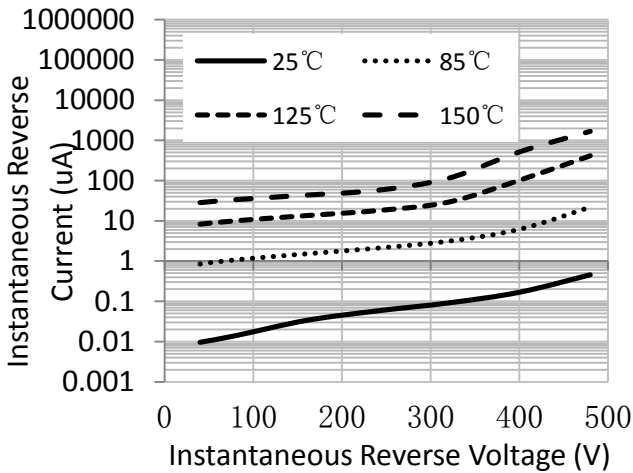


Figure 3. Typical Instantaneous Reverse Characteristics (SMB340U)

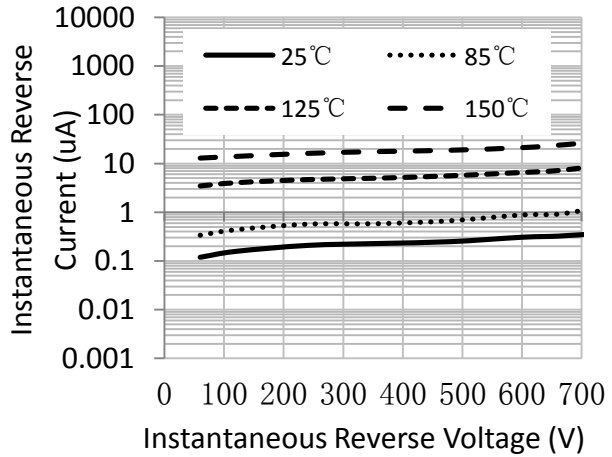


Figure 4. Typical Instantaneous Reverse Characteristics (SMB360U)

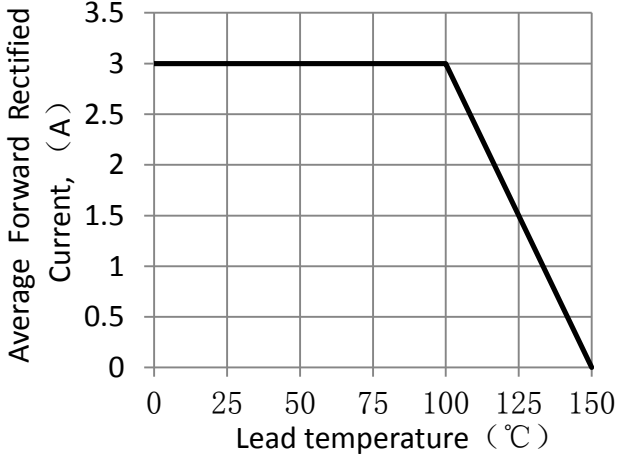


Figure 5. Forward Current Derating Curve

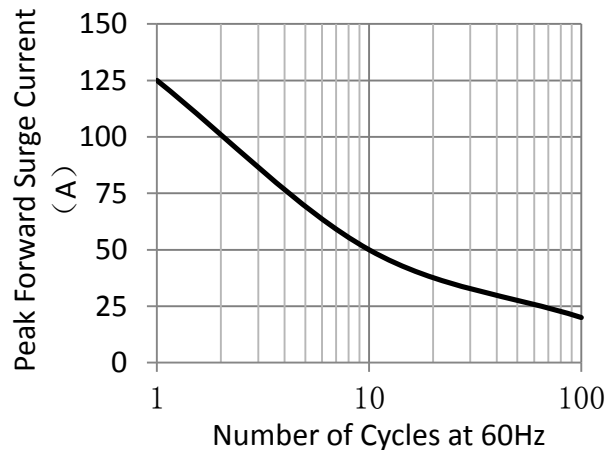
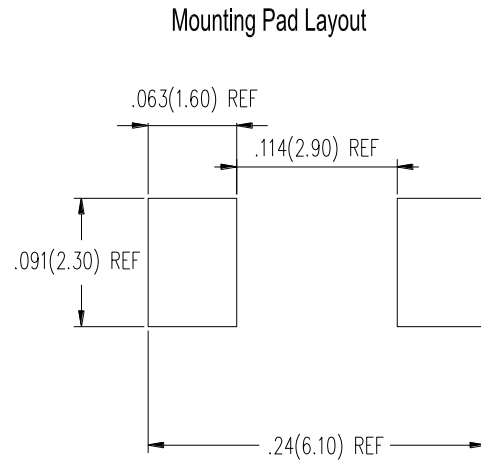
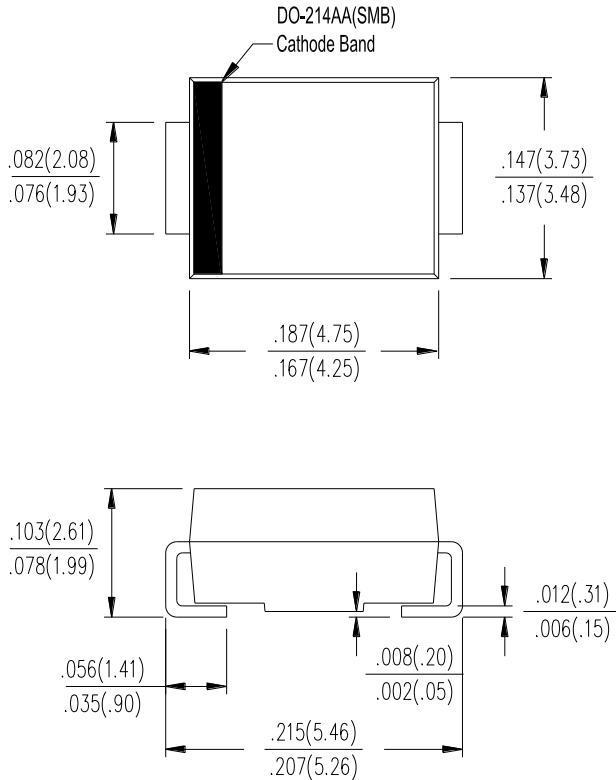


Figure 6. Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

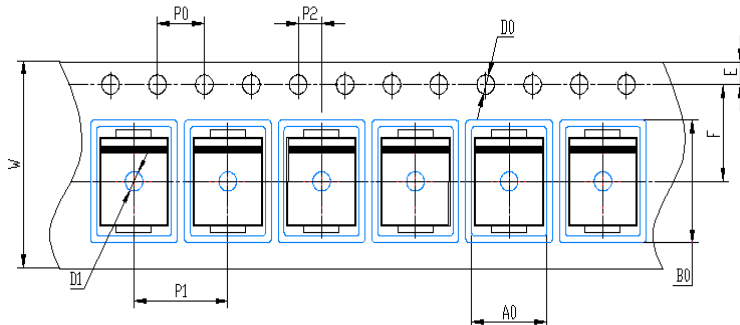
in inches (millimeters)



Packing Information

3000 pcs/Reel, 18 Reels/Box; 12mm Tape, 13" Reel

Tape & Reel Specification



Symbols	SMB (mm)
W	12 ± 0.2
E	1.75 ± 0.1
F	5.5 ± 0.05
D0	1.5 ± 0.1
D1	$1.50 +0.1/-0$
P0	4.0 ± 0.1
P1	8.0 ± 0.1
P2	2.0 ± 0.05
A0	3.95 ± 0.1
B0	5.74 ± 0.1



SMB340U thru SMB360U

Ultra fast Boost Rectifier

Reverse Voltage 400~600V Forward Current 3A

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