

Features

- For surface mounted applications
- Low reverse leakage
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Fast switching for high efficiency
- High forward surge capability

Applications

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

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

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

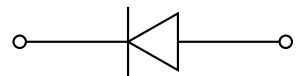
PARAMETER	SYMBOL	UNIT	ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB
Maximum repetitive peak reverse voltage	V_{RRM}	V	50	100	150	200	300	400	600
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	420
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	600
Maximum Average Forward Rectified Current @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	$R_{\theta J-A}^{(1)}$	°C /W	60						
	$R_{\theta J-L}^{(1)}$	°C /W	25						

Note : (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" × 0.2" (5.0mm x 5.0 mm) copper pad areas

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	ES3AB	ES3BB	ES3CB	ES3DB	ES3EB	ES3GB	ES3JB
Maximum instantaneous forward voltage	$I_f=3.0A$	V_F	V	1.0				1.3	1.7	
Maximum reverse recovery time	$I_f=0.5A, I_R=1.0A, I_{rr}=0.25A$	T_{rr}	ns	35						
Maximum DC reverse current at rated DC blocking voltage	$V_{RM}=V_{RRM}$	$T_a=25^\circ C$	I_R	μA	2.0					
		$T_a=125^\circ C$			200					
Typical junction capacitance	4.0V DC, 1MHz	C_j	pF	65						

DO-214AA(SMB)



► **Ratings And Characteristics Curves** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

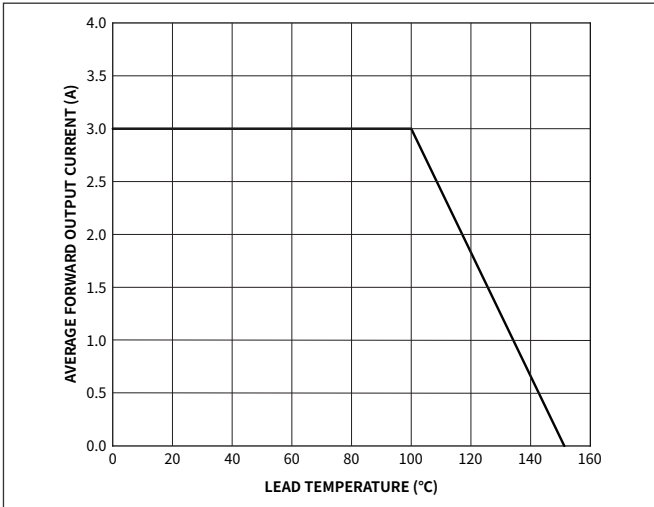


Fig. 1 Forward Current Derating Curve

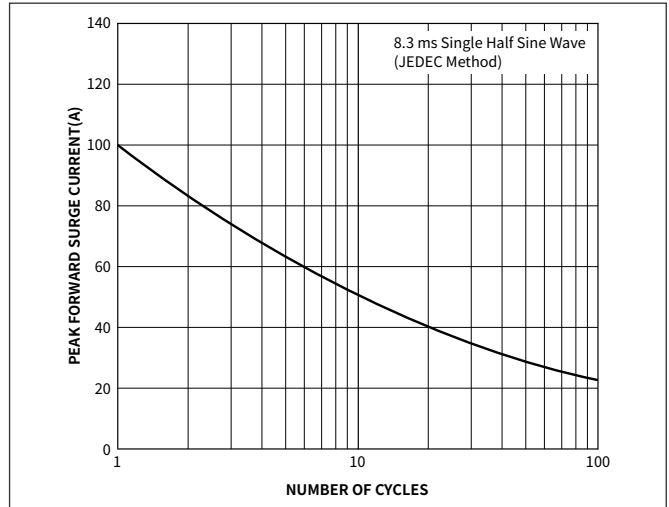


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

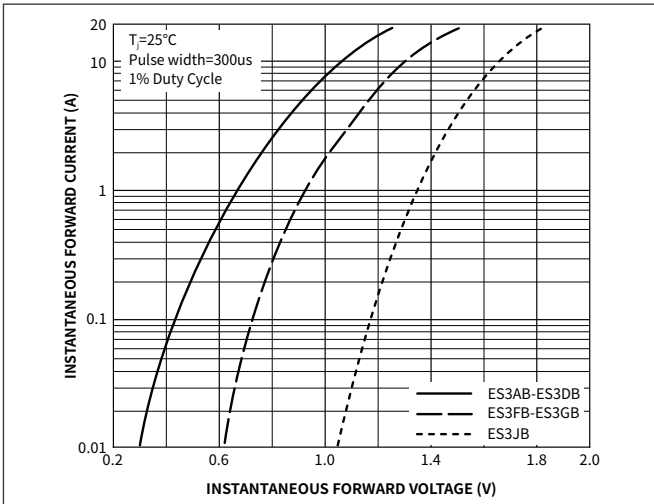


Fig.3 Typical Forward Voltage

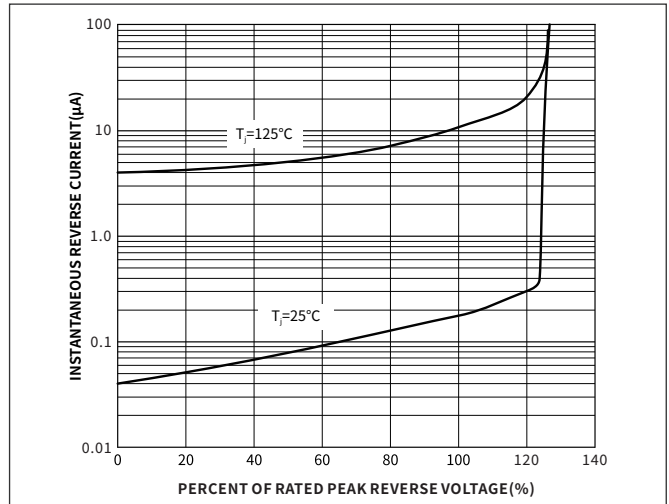


Fig.4 Typical Reverse Characteristics

▶ Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMB	R3	0.098	3000	/	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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