

3.0A Surface Mount Super-Fast Recovery Rectifier

Features

- Glass passivated junction
- For surface mounted application
- Low profile package
- Built-in strain relief, idea for automatic placement
- Super-fast recovery time for high efficiency
- High temperature soldering:
250 °C /10 seconds at terminals
- Plastic package has underwriters laboratory
Flammability classification 94V-0
- RoHS compliant



DO-214AA (SMB)

Mechanical Data

Case:	JEDEC DO-214AA molded plastic
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.003 ounce, 0.093 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted)

Symbol	Description	ES 3AB	ES 3BB	ES 3CB	ES 3DB	ES B3F	ES 3GB	ES 3JB	Unit	Conditions
VRRM	Maximum Repetitive Peak Reverse Voltage	50	100	150	200	300	400	600	V	
VRMS	Maximum RMS Voltage	35	70	105	140	210	280	420	V	
VDC	Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V	
IF(AV)	Maximum Average Forward Rectified Current	3.0							A	$T_L=100^{\circ}\text{C}$
IFSM	Peak Forward Surge Current	100							A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
TJ,TSTG	Operating Junction and Storage Temperature Range	-55 to 150							$^{\circ}\text{C}$	

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ES3xB Series

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted)

Symbol	Description	ES 3AB	ES 3BB	ES 3CB	ES 3DB	ES 3FB	ES 3GB	ES 3JB	Unit	Conditions
V _F	Maximum Instantaneous Forward Voltage	0.95				1.25		1.7	V	I _F =3.0 A
I _R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5							μA	T _A =25 °C
		300								T _A =125 °C
t _{rr}	Typical Reverse Recovery Time	35							nS	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A
C _J	Typical Junction Capacitance	45				30			pF	Measured at 1.0 MHZ and applied V _R = 4.0 v.
R _{θ-JA}	Typical Thermal Resistance	55							° C/W	Mounted on P.C.B. 0.3" x 0.3" (8mmx8mm) copper pad areas
R _{θ-JL}		17								

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves

Fig.1- Typical Forward Current Derating Curve

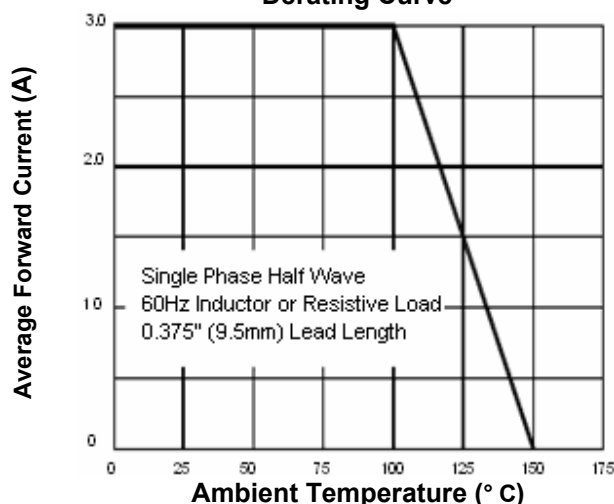
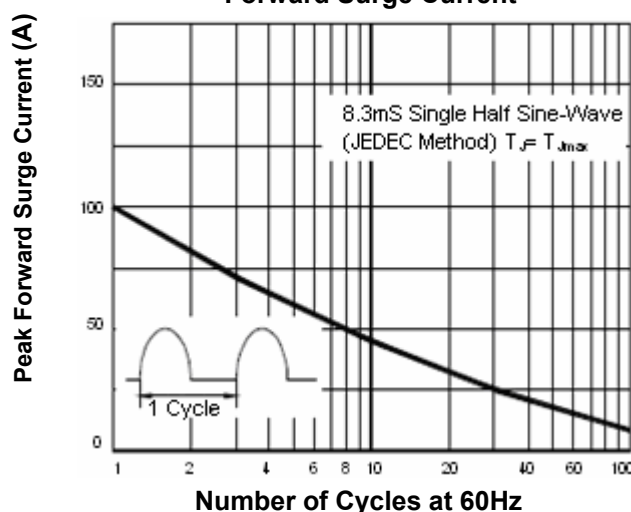


Fig.2- Max. Non-Repetitive Peak Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

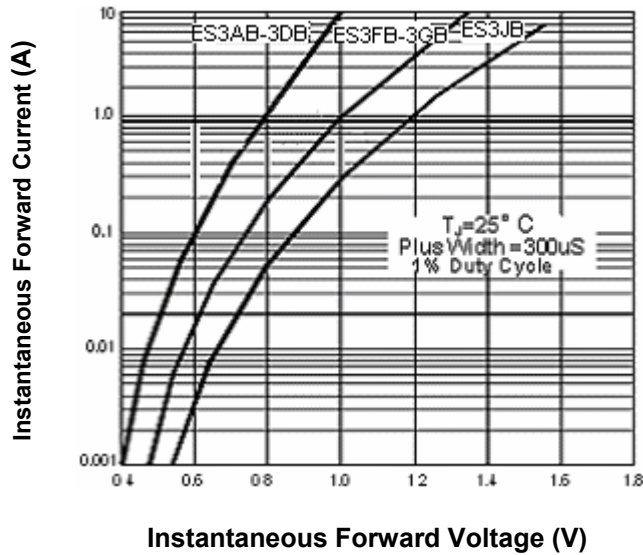


Fig.4- Typical Reverse Characteristics

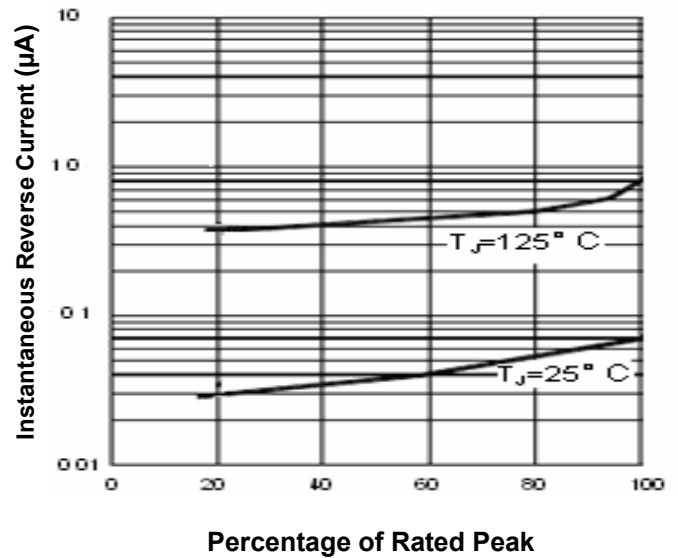
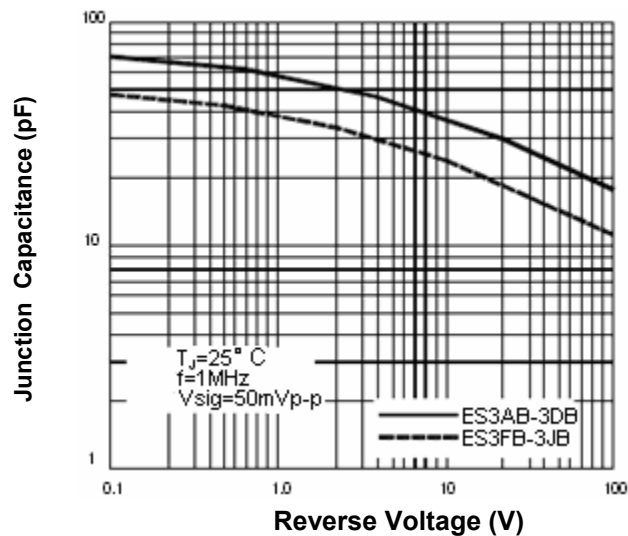


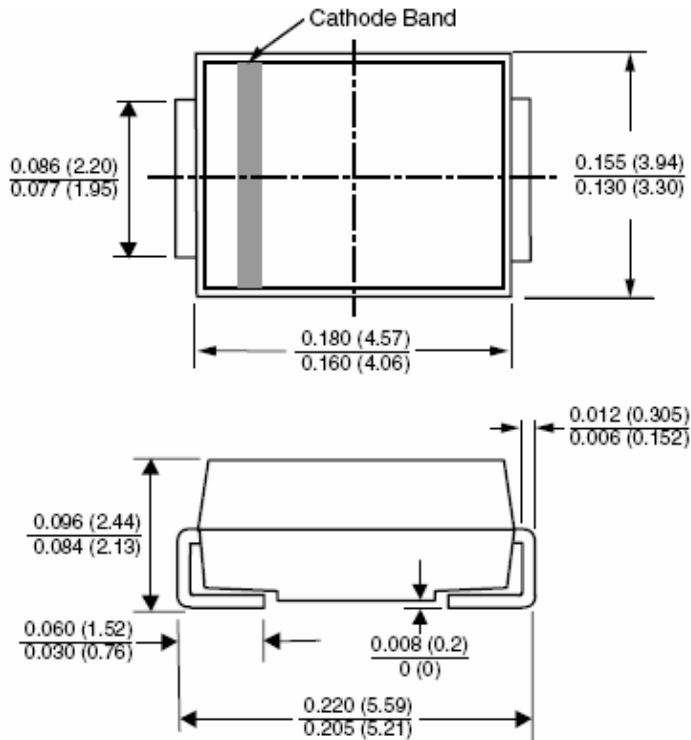
Fig.5- Typical Junction Capacitance



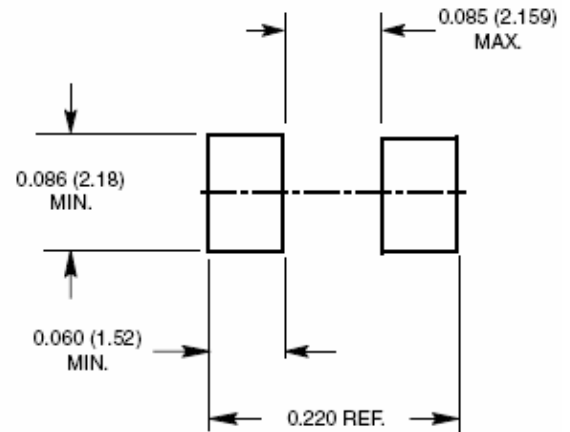
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Dimensions in inch (mm)



Mounting Pad Layout



DO-214AA (SMB)

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