

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-214AB (SMC)

Mechanical Data

Case:	JEDEC DO-214AB molded plastic
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.007 ounce, 0.21 gram

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

Symbol	Description	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	50	100	150	200	300	400	600	V	
V_{RMS}	Maximum RMS Voltage	35	70	105	140	210	280	420	V	
V_{DC}	Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	3.0							A	T _L =100°C
I_{FSM}	Peak Forward Surge Current	100							A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 to 150							°C	

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ES3x 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	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	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

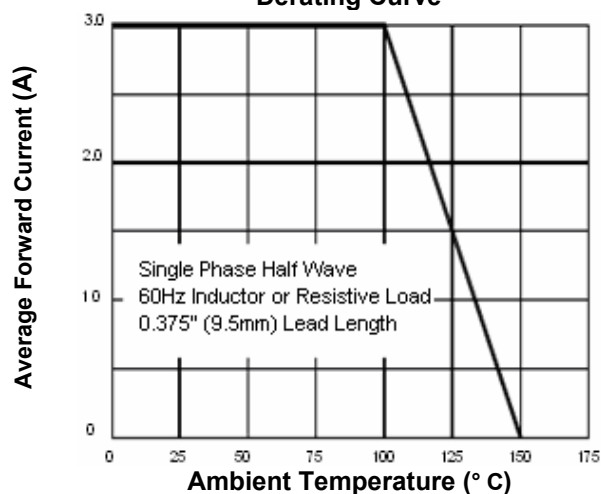
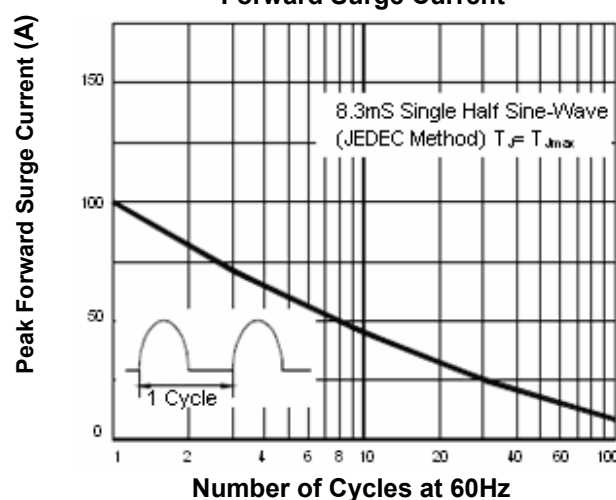


Fig.2- Max. Non-Repetitive Peak Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

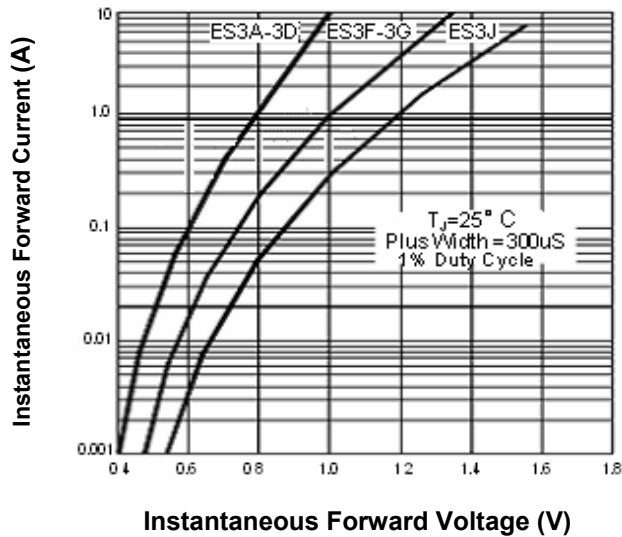


Fig.4- Typical Reverse Characteristics

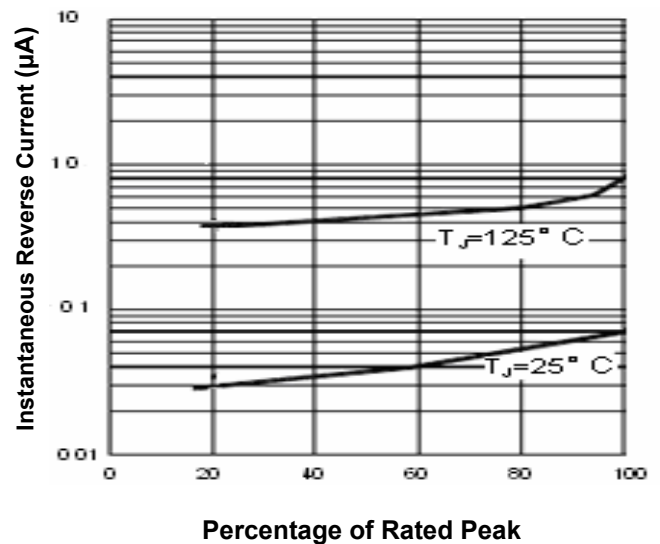
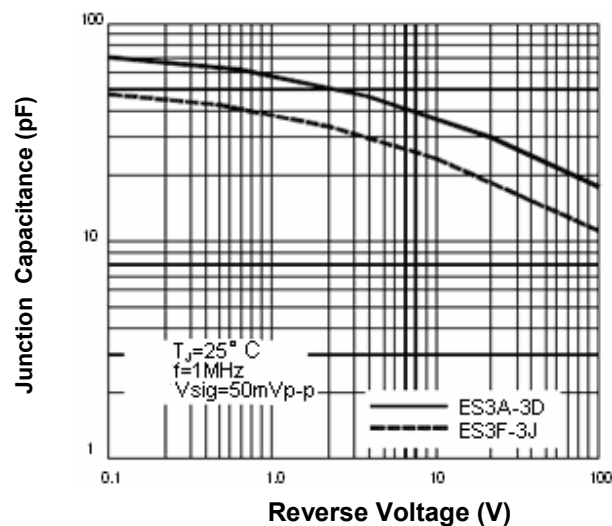


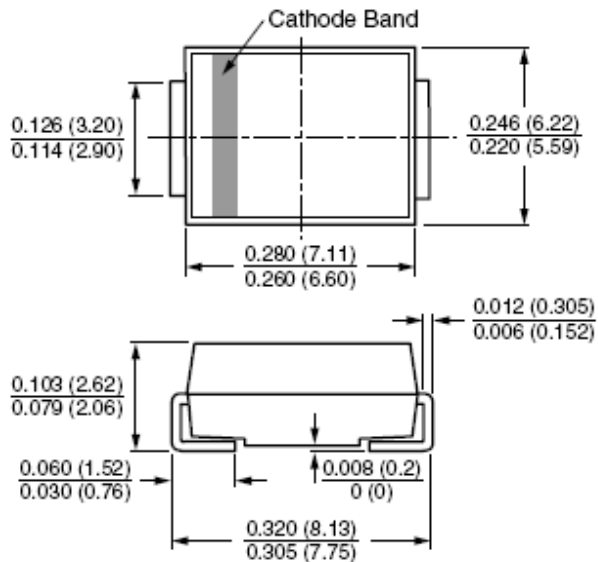
Fig.5- Typical Junction Capacitance



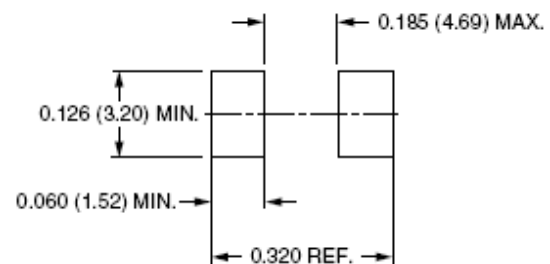
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Dimensions in inch (mm)



Mounting Pad Layout



DO-214AB (SMC)

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