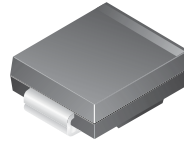


ES3A - ES3D

Features

- For surface mount applications.
- Glass passivated junction.
- Low profile package.
- Easy pick and place.
- Built-in strain relief.
- Superfast recovery times for high efficiency.



SMC/DO-214AB
COLOR BAND DENOTES CATHODE

3.0 Ampere Superfast Rectifiers

Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I _{F(AV)}	Average Rectified Current .375 " lead length @ T _A = 75°C	3.0	A
I _{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	100	A
P _D	Total Device Dissipation Derate above 25°C	2.66 21.28	W mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient**	47	°C/W
R _{θJL}	Thermal Resistance, Junction to Lead**	12	°C/W
T _{stg}	Storage Temperature Range	-50 to +150	°C
T _J	Operating Junction Temperature	-50 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

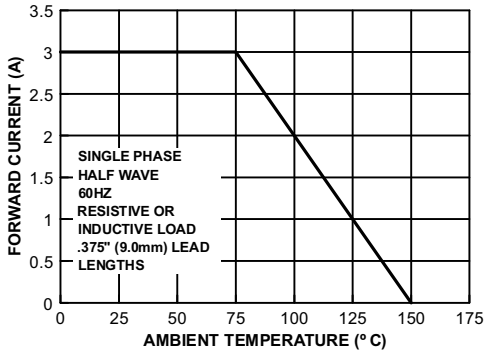
**Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics T_A = 25°C unless otherwise noted

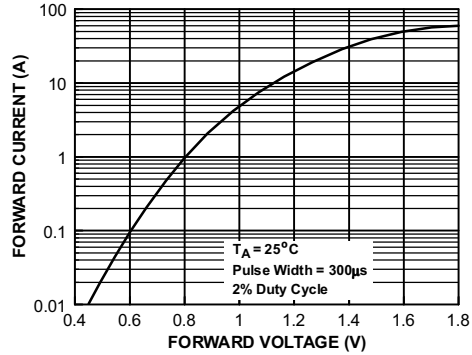
Symbol	Parameter	Device				Units
		3A	3B	3C	3D	
V _{RRM}	Maximum Repetitive Reverse Voltage	50	100	150	200	V
V _{RMS}	Maximum RMS Voltage	35	70	105	140	V
V _R	DC Reverse Voltage (Rated V _R)	50	100	150	200	V
I _{RM}	Maximum Instantaneous Reverse Current @ rated V _R T _A = 25°C T _A = 100°C	10 500				μA μA
t _{rr}	Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A	20				ns
V _{FM}	Maximum Instantaneous Forward Voltage @ 3.0 A	0.90				V
C	Typical Junction Capacitance V _R = 4.0 V, f = 1.0 MHz	45				pF

Typical Characteristics

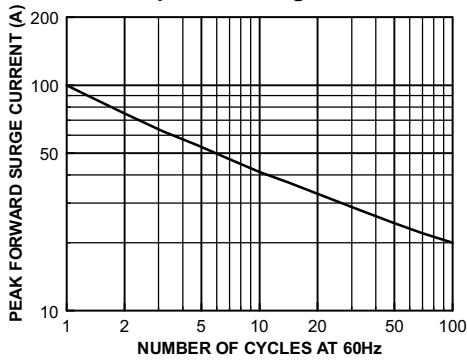
Forward Current Derating Curve



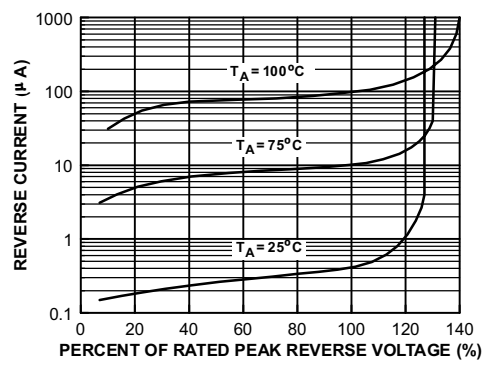
Forward Characteristics



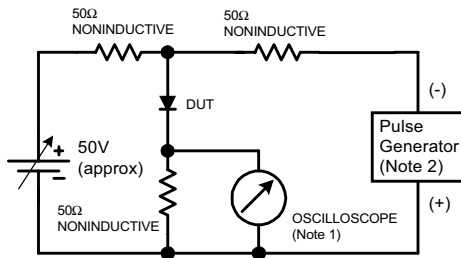
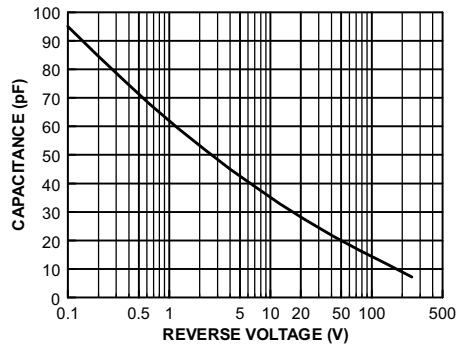
Non-Repetitive Surge Current



Reverse Characteristics

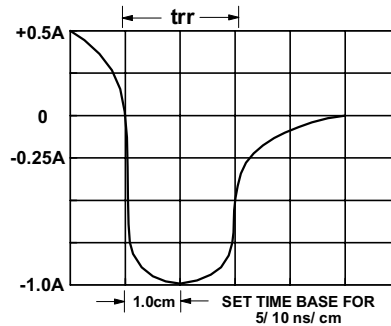


Junction Capacitance



NOTES:

1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
2. Rise time = 10 ns max; Source impedance = 50 ohms.

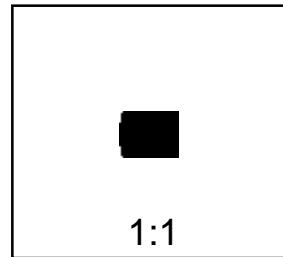
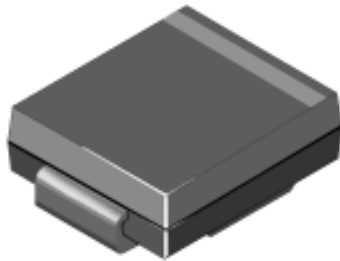


Reverse Recovery Time Characteristic and Test Circuit Diagram

DO-214AB(SMC) Package Dimensions



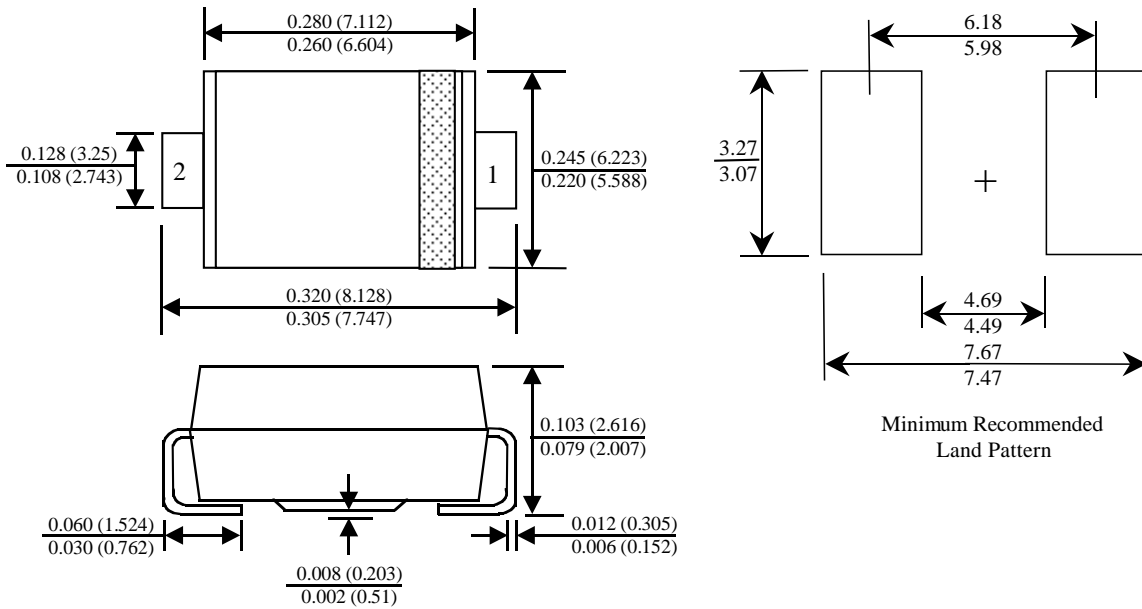
DO-214AB(SMC) (FS PKG Code P7)



Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.21



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