

Discrete POWER & Signal Technologies

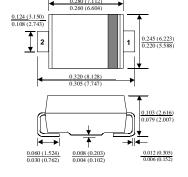
ES3A - ES3D

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	
lo	Average Rectified Current .375 " lead length @ T _A = 75°C	3.0	Α	
i _{f(surge)}	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	100	А	
P _D	Total Device Dissipation Derate above 25°C	2.66 21.28	W mW/°C	
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient**	47	°C/W	
$R_{\theta JL}$	Thermal Resistance, Junction to Lead**	12	°C/W	
T _{stg}	Storage Temperature Range	-50 to +150	°C	
TJ	Operating Junction Temperature	-50 to +150	°C	

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

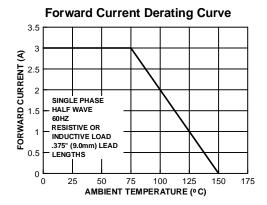
Electrical Characteristics T_A

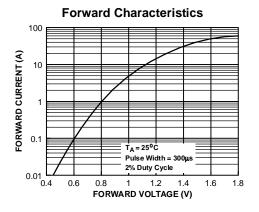
 $T_A = 25$ °C unless otherwise noted

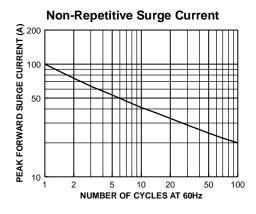
Parameter	Device				Units
	3A	3B	3C	3D	
Peak Repetitive Reverse Voltage	50	100	150	200	V
Maximum RMS Voltage	35	70	105	140	V
DC Reverse Voltage (Rated V _R)	50	100	150	200	V
Maximum Reverse Current		1	•	•	
@ rated V_R $T_A = 25^{\circ}C$		10)		μΑ
T _A = 100°C		50	0		μΑ
Maximum Reverse Recovery Time	20			nS	
$I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{RR} = 0.25 \text{ A}$					
Maximum Forward Voltage @ 3.0 A	0.90				V
Typical Junction Capacitance		45	5		pF
$V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$					

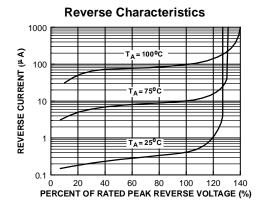
^{**}Device mounted on FR-4 PCB 0.013 mm.

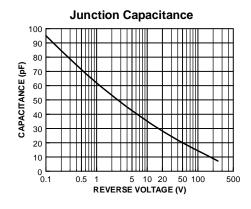
Typical Characteristics

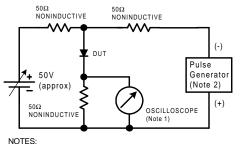


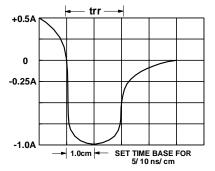












- 1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf. 2. Rise time = 10 ns max; Source impedance = 50 ohms.

Reverse Recovery Time Characterstic and Test Circuit Diagram

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