

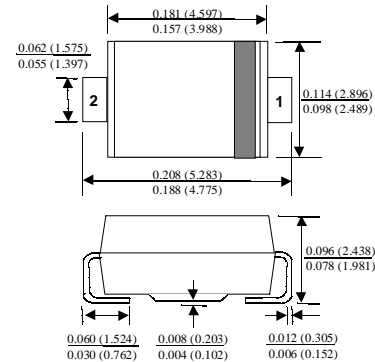
ES1A - ES1D

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.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE



1.0 Ampere Superfast Rectifiers

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

Symbol	Parameter	Value	Units
I _o	Average Rectified Current @ T _A = 120°C	1.0	A
i _{f(surge)}	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
P _D	Total Device Dissipation Derate above 25°C	1.47 11.76	W mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient**	85	°C/W
R _{θJL}	Thermal Resistance, Junction to Lead**	35	°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.

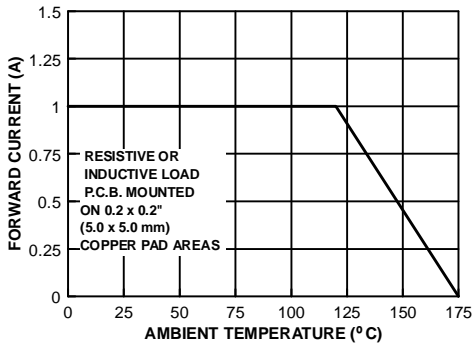
**Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics T_A = 25°C unless otherwise noted

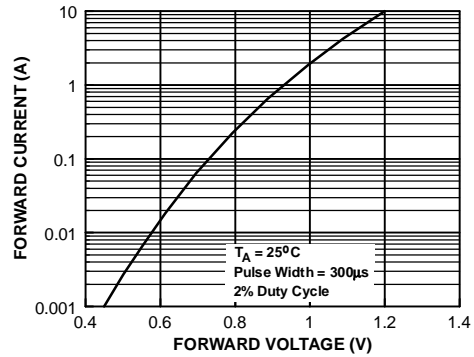
Parameter	Device				Units
	1A	1B	1C	1D	
Peak Repetitive Reverse Voltage	50	100	150	200	V
Maximum RMS Voltage	35	70	105	140	V
DC Reverse Voltage (Rated V _R)	50	100	150	200	V
Maximum Reverse Current @ rated V _R T _A = 25°C T _A = 100°C	5.0 100				μA μA
Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A	15				nS
Maximum Forward Voltage @ 1.0 A	0.92				V
Typical Junction Capacitance V _R = 4.0 V, f = 1.0 MHz	7.0				pF

Typical Characteristics

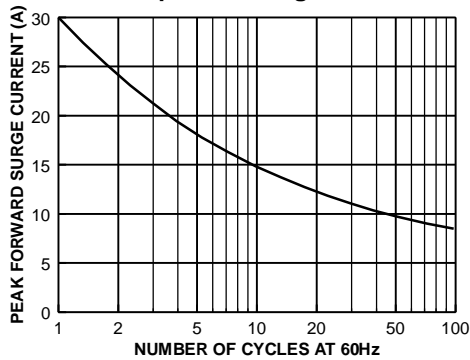
Forward Current Derating Curve



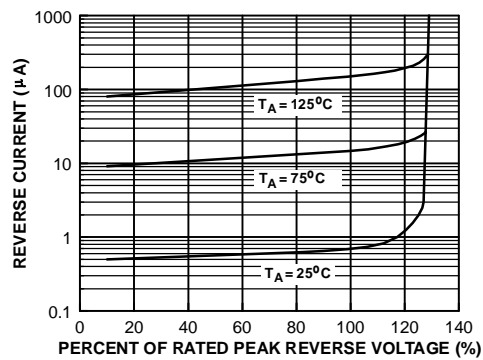
Forward Characteristics



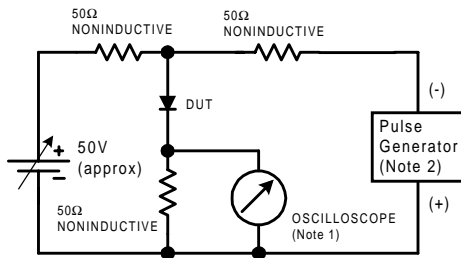
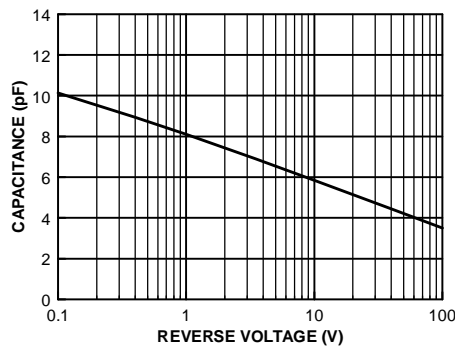
Non-Repetitive Surge Current



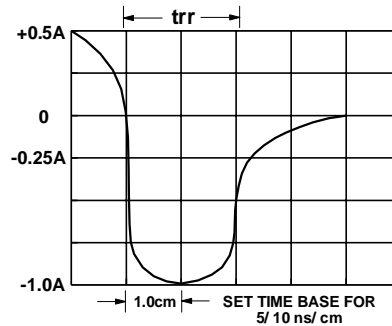
Reverse Characteristics



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

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