

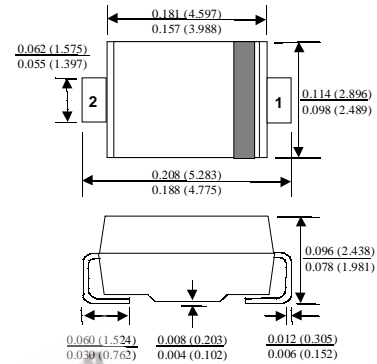
S1A - S1M

Features

- Low profile package.
- Glass passivated junction.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE



1.0 Ampere General Purpose Rectifiers

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
I_o	Average Rectified Current @ $T_A = 100^\circ\text{C}$	1.0	A
$I_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	40	A
P_D	Total Device Dissipation Derate above 25°C	1.4 11	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	85	$^\circ\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

*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

$T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Device							Units
	1A	1B	1D	1G	1J	1K	1M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$	1.0							μA
$T_A = 125^\circ\text{C}$	50							μA
Maximum Forward Voltage @ 1.0 A	1.1							V
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$	1.8							μS
Typical Junction Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$	12							pF

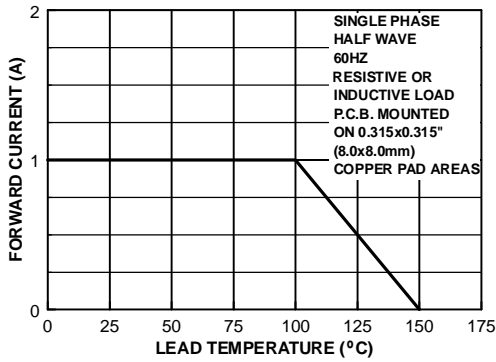
General Purpose Rectifiers

(continued)

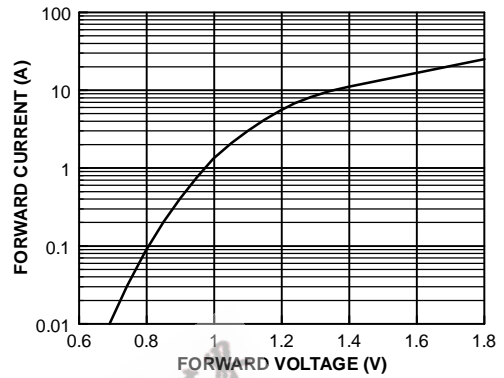
S1A-S1M

Typical Characteristics

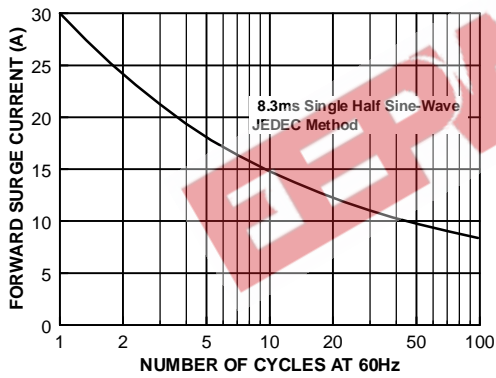
Forward Current Derating Curve



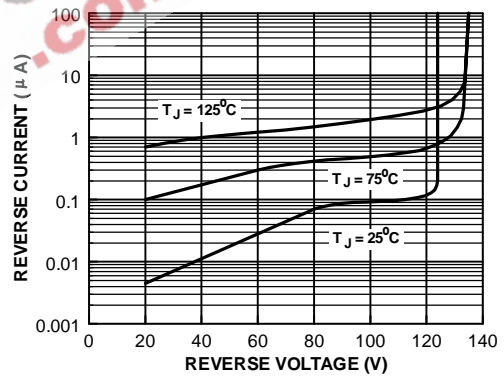
Forward Characteristics



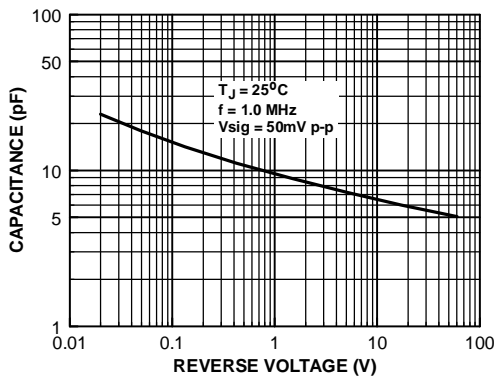
Non-Repetitive Surge Current



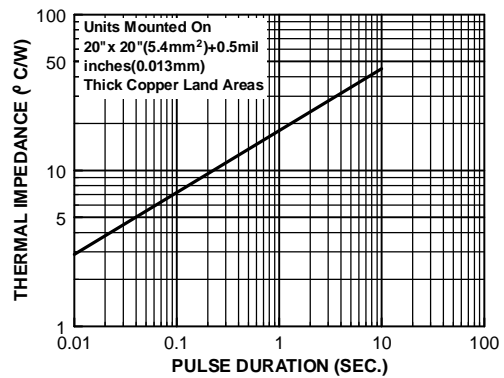
Reverse Characteristics



Junction Capacitance



Thermal Impedance



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