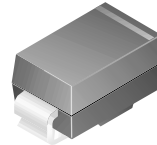


# S1A - S1M

## Features

- Low profile package.
- Glass passivated junction.



**SMA/DO-214AC**

COLOR BAND DENOTES CATHODE

## General Purpose Rectifiers

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ $T_A = 100^\circ\text{C}$	1.0							A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	40							A
$T_{stg}$	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.

### Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	1.4	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient*	85	$^\circ\text{C}/\text{W}$

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

### Electrical Characteristics

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

Symbol	Parameter	Device							Units
		1A	1B	1D	1G	1J	1K	1M	
$V_F$	Forward Voltage @ 1.0 A	1.1							V
$t_{rr}$	Reverse Recovery Time $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$	1.8							$\mu\text{s}$
$I_R$	Reverse Current @ rated $V_R$	1.0							$\mu\text{A}$
		50							$\mu\text{A}$
$C_T$	Total Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$	12							pF

Typical Characteristics

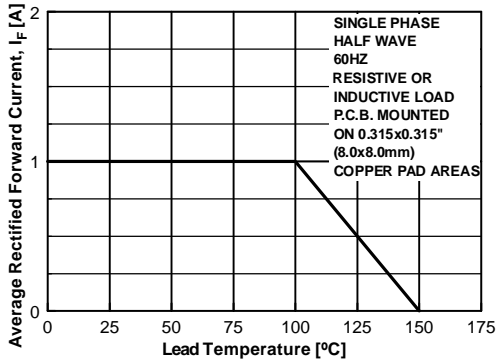


Figure 1. Forward Current Derating Curve

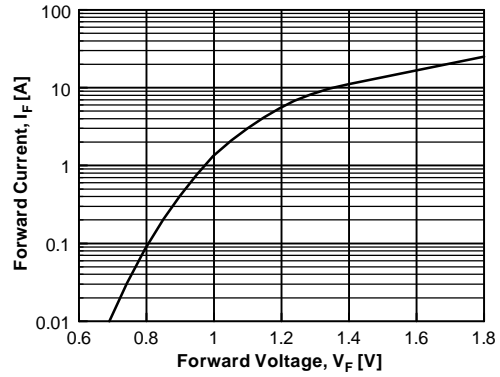


Figure 2. Forward Voltage Characteristics

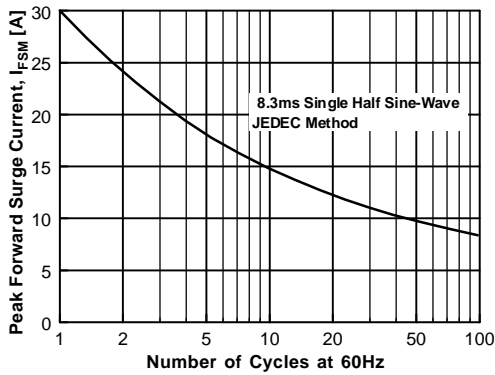


Figure 3. Non-Repetitive Surge Current

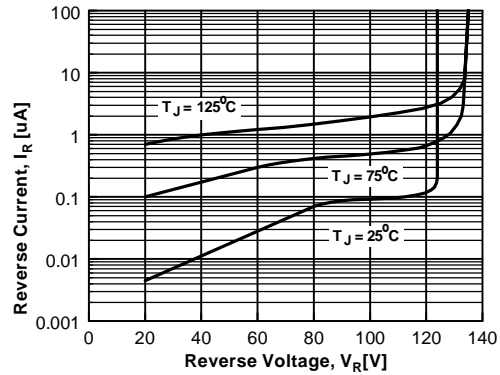


Figure 4. Reverse Current vs Reverse Voltage

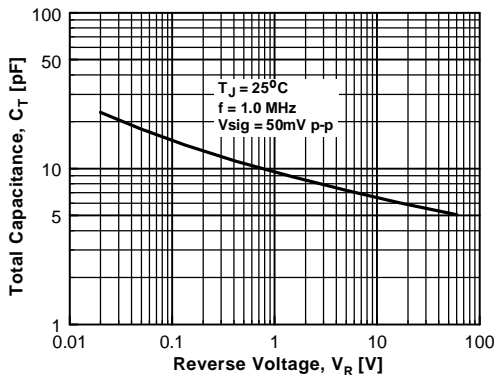


Figure 5. Total Capacitance

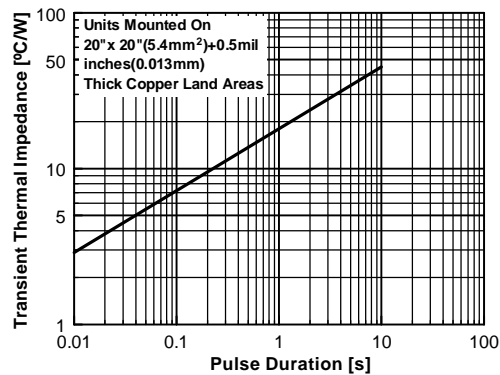


Figure 6. Thermal Impedance Characteristics

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CoolFET <sup>TM</sup>	I <sup>2</sup> C <sup>TM</sup>	PACMAN <sup>TM</sup>	SuperFET <sup>TM</sup>	
CROSSVOLT <sup>TM</sup>	<i>i-Lo</i> <sup>TM</sup>	POP <sup>TM</sup>	SuperSOT <sup>TM</sup> -3	
DOMET <sup>TM</sup>	ImpliedDisconnect <sup>TM</sup>	Power247 <sup>TM</sup>	SuperSOT <sup>TM</sup> -6	
EcoSPARK <sup>TM</sup>	IntelliMAX <sup>TM</sup>	PowerEdge <sup>TM</sup>	SuperSOT <sup>TM</sup> -8	
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