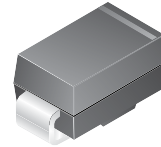


S1A - S1M

General Purpose Rectifiers

Features

- Low profile package.
- Glass passivated junction.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE

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 8.3ms Single Half-Sine-Wave	30							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 maybe 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	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
V_F	Forward Voltage @ 1.0A	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							μs
I_R	Reverse Current @ rated V_R $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	1.0 50							μA μA
C_T	Total Capacitance $V_R=4.0\text{V}, f=1.0\text{MHz}$	12							pF

Typical Performance Characteristics

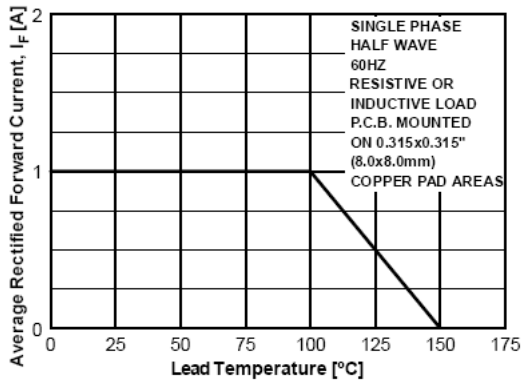


Figure 1. Forward Current Derating Curve

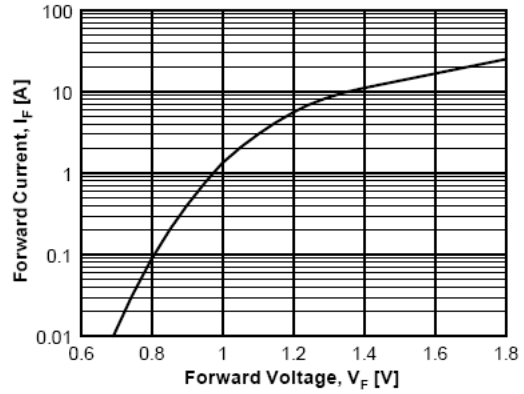


Figure 2. Forward Voltage Characteristics

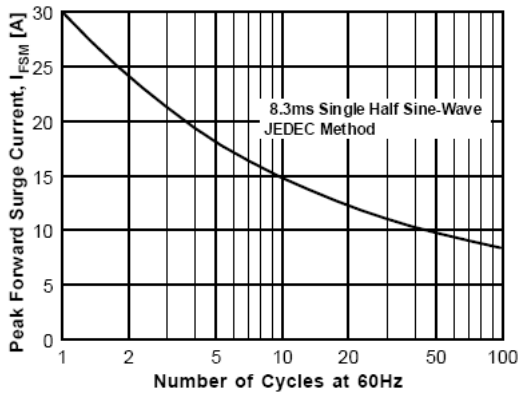


Figure 3. Non-Repetitive Surge Current

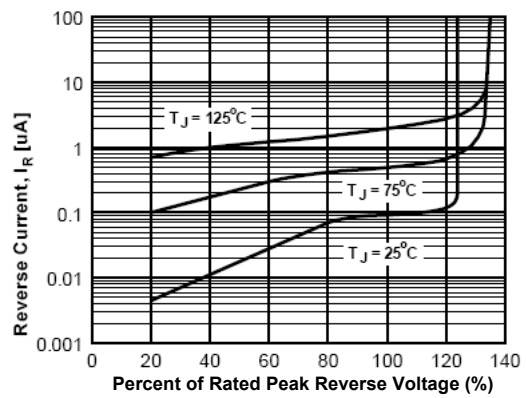


Figure 4. Reverse Current vs Reverse Voltage

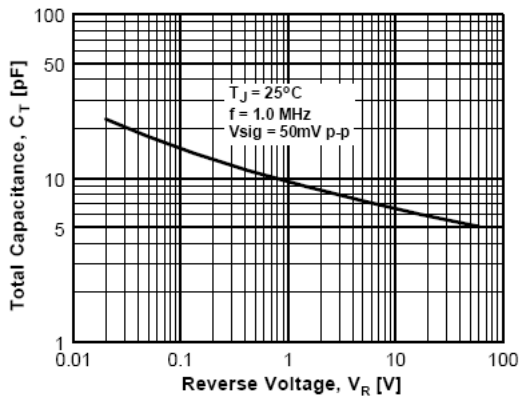


Figure 5. Total Capacitance

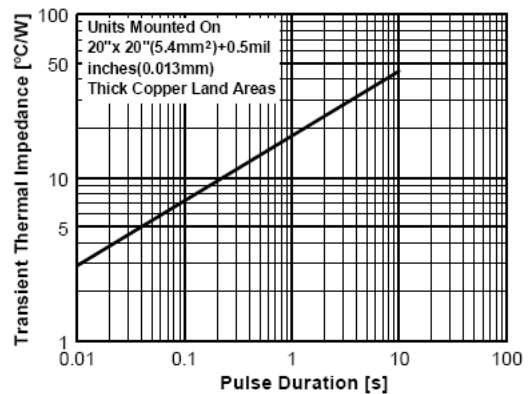







Figure 6. Thermal Impedance Characteristics



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