Technical Data
Data Sheet N1140, Rev. -

Green Products

Power Surface Mount Schottky Rectifier (80/100V, 30Amp)

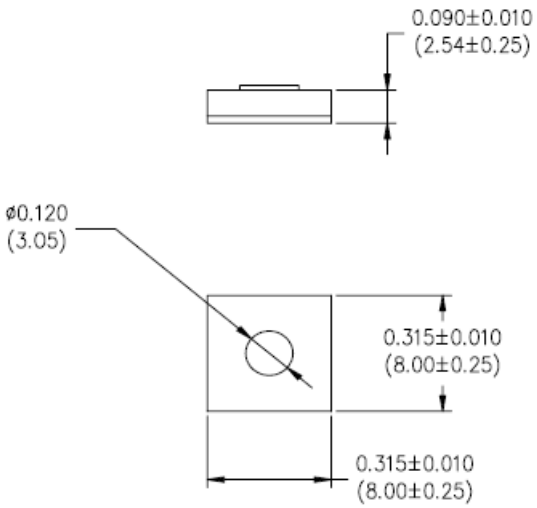
Applications:

● Switching power supply ● Redundant power subsystems ● Reverse battery protection ● Converters ● Many other high current AC/DC power supplies

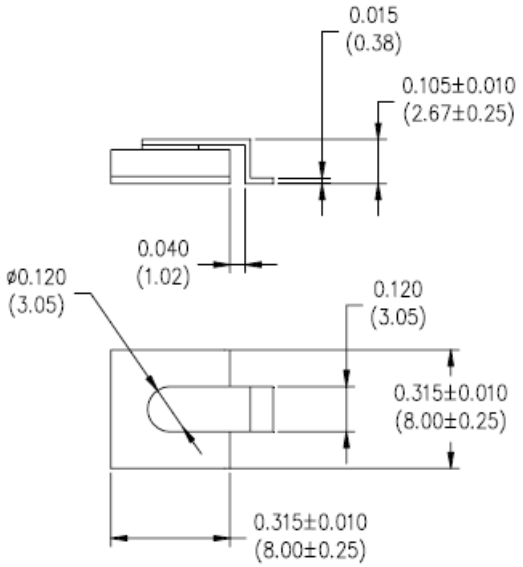
Features:

- **175℃ T_J operation**
- **Low reverse leakage current**
- **High surge capacities**
- **Low forward voltage drop**
- **High frequency operation**
- **Low profile surface mount package**
- **This is a Pb − Free Device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Mechanical Dimensions: In Inches / mm



SPD-1



SPD-1A

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	80	33SPA080/A	V
			100	33SPA100/A	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	30		A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	570		A
Non-Repetitive Avalanche Energy	E_{AS}	T_J=25℃,I_{AS}=0.75A,L=40mH	11.25		mJ
Repetitive Avalanche Current	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. V_A=1.5×V_R typical	0.75		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 30A, Pulse, T_J = 25 °C	0.84	V
	V_{F2}	@ 30A, Pulse, T_J = 125 °C	0.68	V
Max. Reverse Current*	I_{R1}	@V_R = rated V_R, Pulse, T_J = 25 °C	0.75	mA
	I_{R2}	@V_R = rated V_R, Pulse, T_J = 125 °C	15	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG}=50mV(p-p)	1000	pF

* Pulse Width < 300μs, Duty Cycle <2%

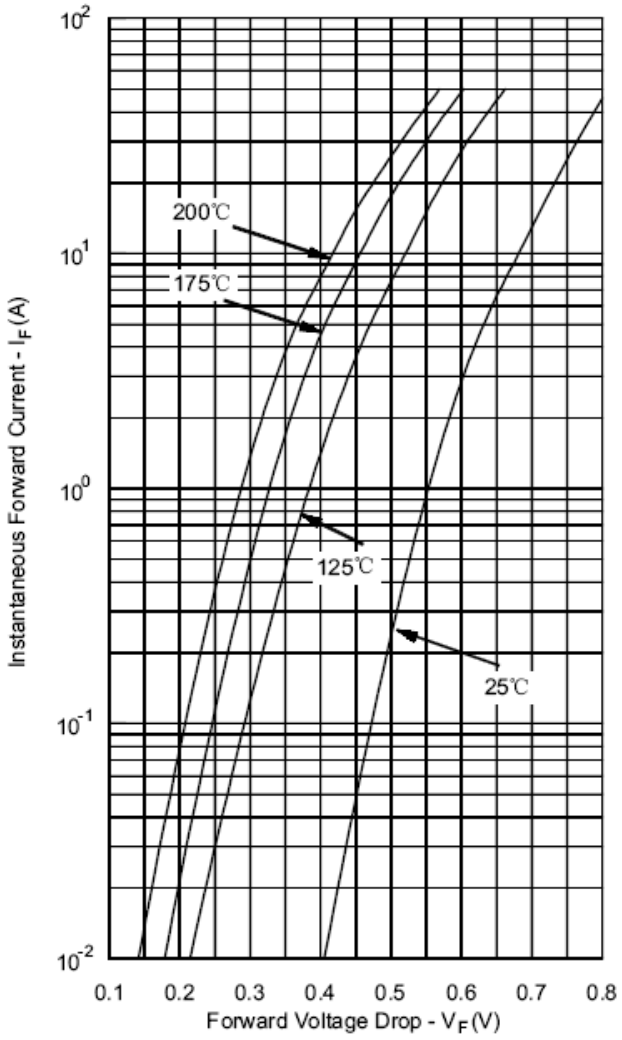
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	°C
Max. Storage Temperature	T_{stg}	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.50	°C/W
Case Style	SPD-1/A			

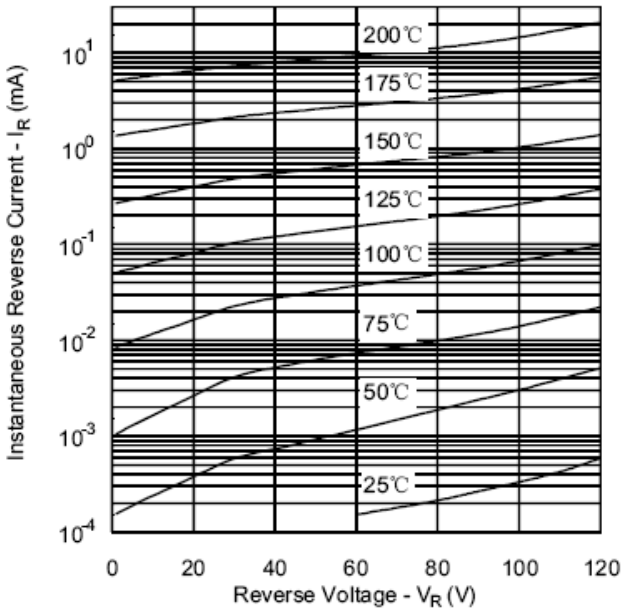
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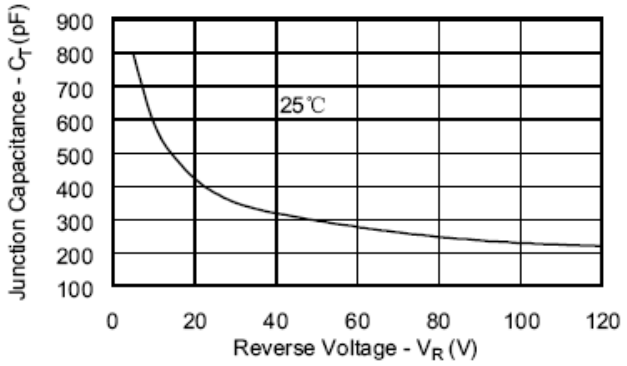
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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