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

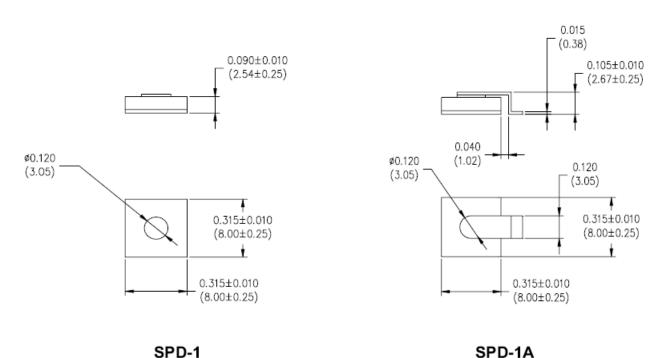
## **Applications:**

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

#### Features:

- 175°C T<sub>J</sub> 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



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## **Maximum Ratings:**

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

### **Electrical Characteristics:**

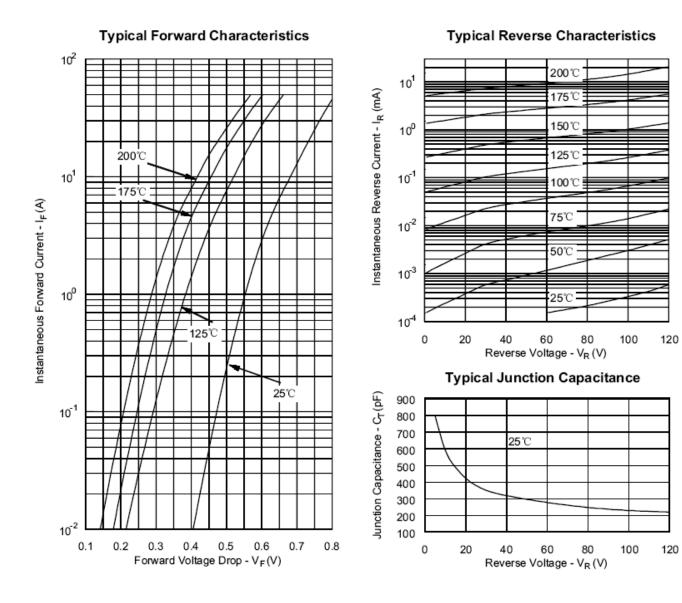
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_{F1}$	@ 30A, Pulse, T <sub>J</sub> = 25 °C	0.84	V
	$V_{F2}$	@ 30A, Pulse, T <sub>J</sub> = 125 °C	0.68	V
Max. Reverse Current*	I <sub>R1</sub>	$@V_R = \text{rated } V_R, \text{ Pulse}, \\ T_J = 25  ^{\circ}\text{C}$	0.75	mA
	I <sub>R2</sub>	$@V_R = \text{rated } V_R, \text{ Pulse}, \\ T_J = 125  ^{\circ}\text{C}$	15	mA
Max. Junction Capacitance	Ст	$@V_R = 5V, T_C = 25 °C$ $f_{SIG} = 1MHz,$ $V_{SIG} = 50mV(p-p)$	1000	pF

<sup>\*</sup> 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 <sub>stg</sub>	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	$R_{ heta JC}$	DC operation	0.50	°C/W
Case Style		SPD-1/A		

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