

Power Surface Mount Schottky Rectifier (80V/100V, 120Amp)

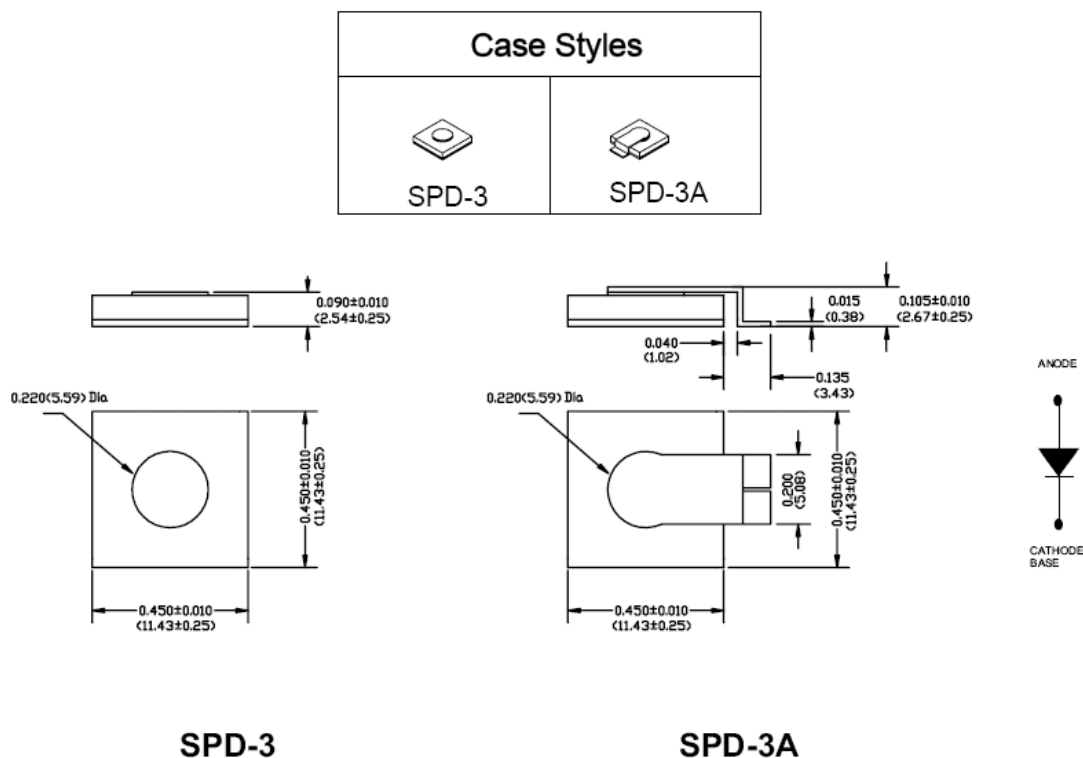
Applications:

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

Features:

- 175 °C T_J operation
- Low forward voltage drop
- High surge capacities
- High frequency operation
- Guaranteed reverse avalanche capability
- 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 mm/ Inches



Suffix "R" Denotes Reversed Polarity

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	80	V
			(123SPC080/A)	
			100	(123SPC100/A)
Max. Average Forward	$I_{F(AV)}$	50% duty cycle, rectangular wave form	120	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	1650	A
Non-Repetitive Avalanche Energy(per leg)	E_{AS}	$T_J=25^{\circ}C, I_{AS}=0.75A,$ $L=40\text{ mH}$	11.25	mJ
Repetitive Avalanche Current(per leg)	I_{AR}	I_{AS} decaying linearly to 0 in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$	0.75	A

Electrical Characteristics:

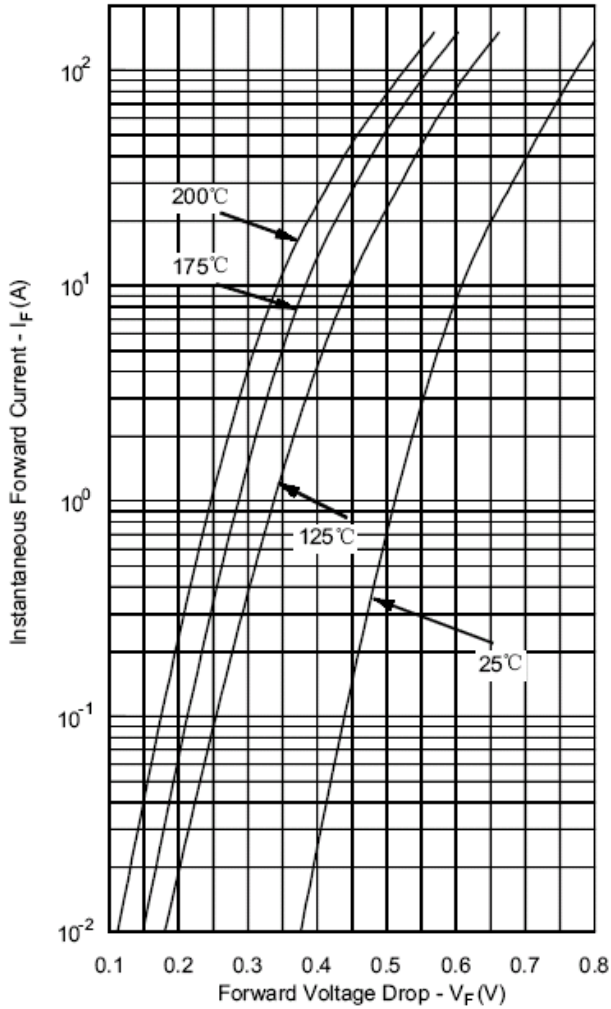
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 120A, Pulse, $T_J = 25^{\circ}C$	0.87	V
	V_{F2}	@ 120A, Pulse, $T_J = 125^{\circ}C$	0.72	V
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	2.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	48.0	mA
Max. Junction Capacitance (per leg)	C_J	@ $V_R = 5V, T_C = 25^{\circ}C$ $f_{SIG} = 1\text{MHz}$	3000	pF
Max. Voltage Rated of Change	dv/dt	-	10,000	V/ μ s

* Pulse Width < 300 μ s, Duty Cycle <2%

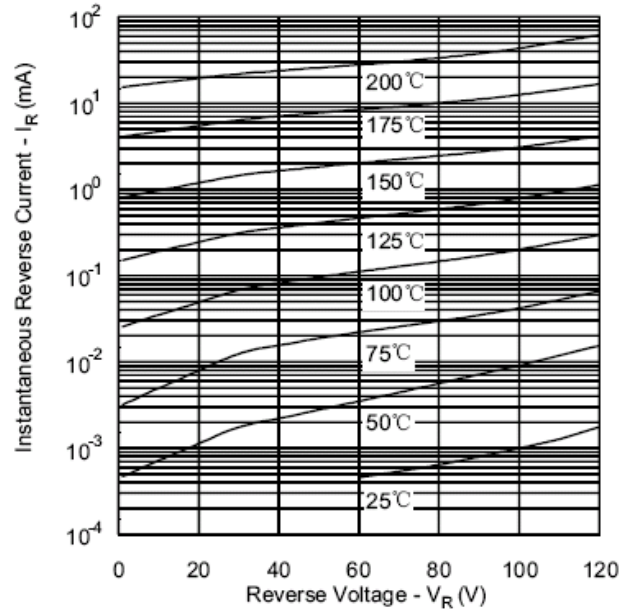
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.20	$^{\circ}C/W$
Case Style	SPD-3/A			

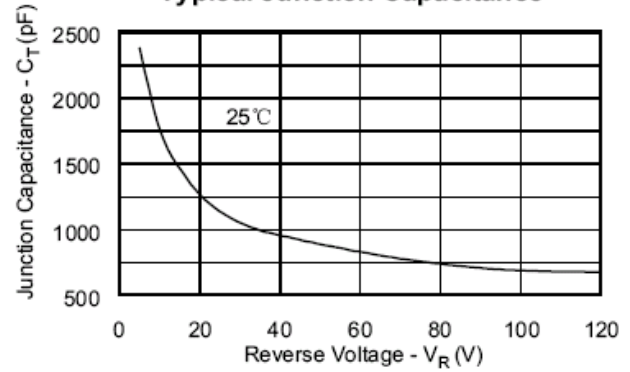
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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