

Power Surface Mount Schottky Rectifier (30V, 120Amp)

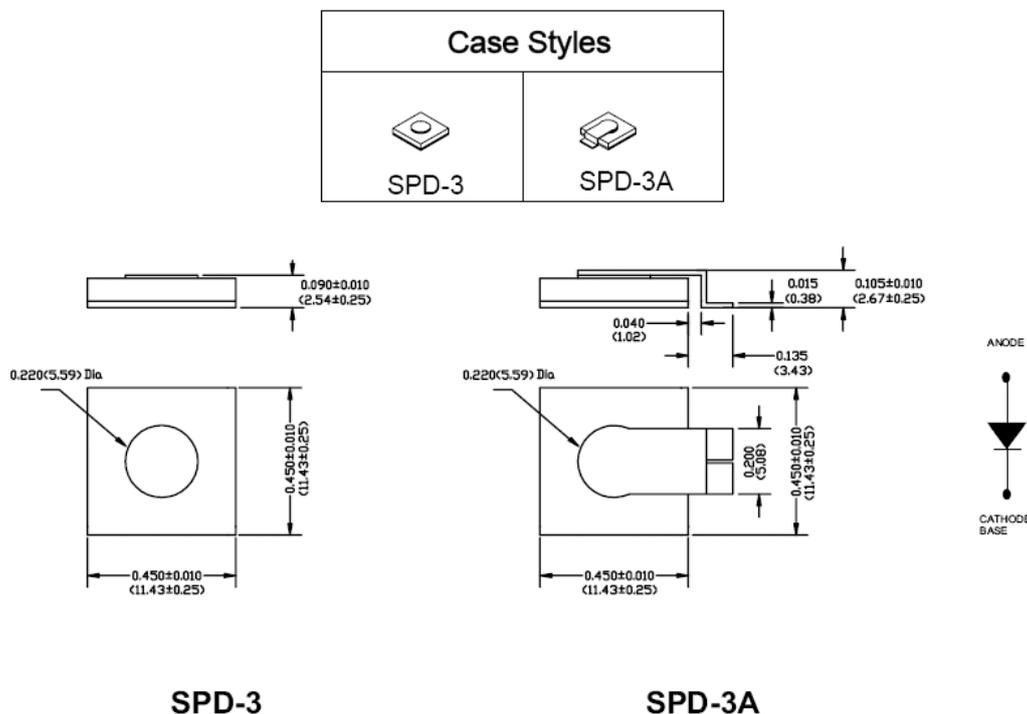
Applications:

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

Features:

- 150 °C T_J operation
- Low forward voltage drop
- Low reverse leakage current
- 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 Inches / mm



Suffix “R” Denotes Reversed Polarity

- China - Germany - Korea - Singapore - United States •
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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	30	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	120	A
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}	$T_J=25^{\circ}C, I_{AS}=16.9A,$ $L=0.53mH$	76	mJ
Repetitive Avalanche Current(per leg)	I_{AR}	I_{AS} decaying linearly to 0 in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$	16.9	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 120A, Pulse, $T_J = 25^{\circ}C$	0.53	V
	V_{F2}	@ 120A, Pulse, $T_J = 125^{\circ}C$	0.43	V
Reverse Current*	I_{R1}	@ $V_R =$ rated V_R , Pulse, $T_J = 25^{\circ}C$	12	mA
	I_{R2}	@ $V_R =$ rated V_R , Pulse, $T_J = 125^{\circ}C$	600	mA
Junction Capacitance	C_J	@ $V_R = 5V, T_C = 25^{\circ}C$ $f_{SIG} = 1MHz, V_{SIG}=50mV(p-p)$	6600	pF

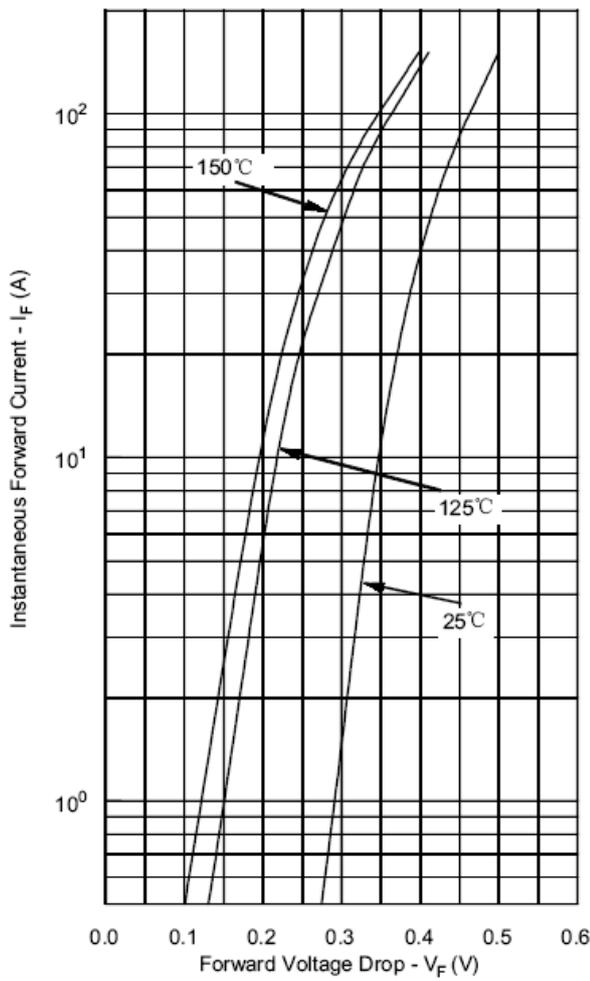
* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

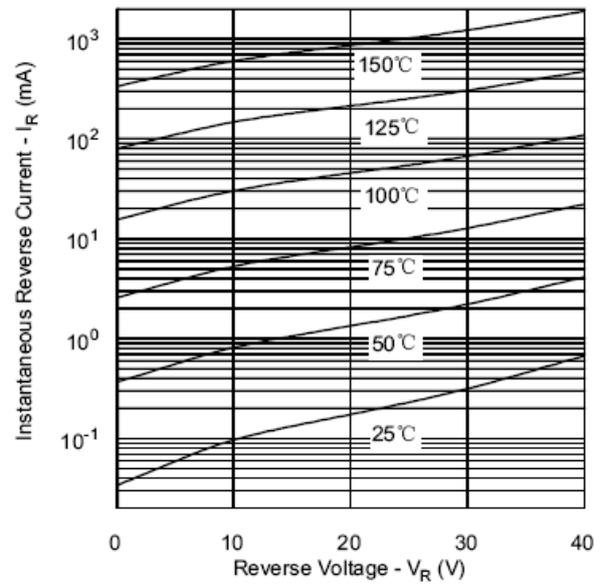
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}C$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}C$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.20	$^{\circ}C/W$
Case Style	SPD-3/A			



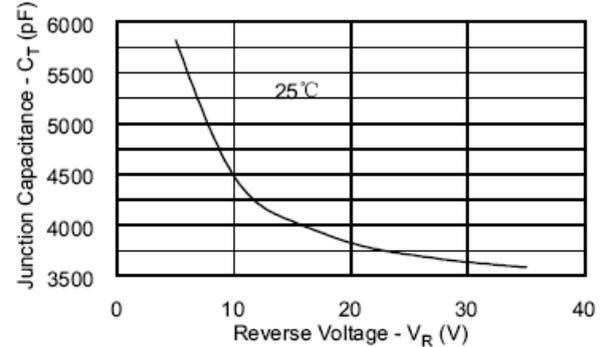
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





122SPC030/A

Technical Data
Data Sheet N1160, Rev. -

Green Products

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