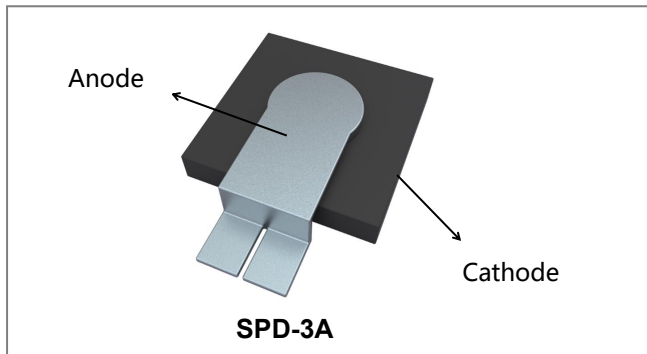


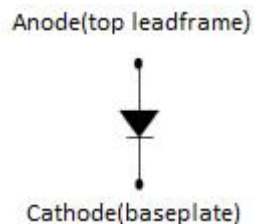
Power Surface Mount Schottky Rectifier (45V, 120Amp)



Features

- 150 °C T_J operation
- Low forward voltage drop
- High surge capacities
- High frequency operation
- Guaranteed reverse avalanche capability
- Low profile surface mount package
- Base plate: Pure Sn plated; Terminals: Pure Sn plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Applications

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

Maximum Ratings(limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	45	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _C =116°C, rectangular wave form	120	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	1650	A
Non-Repetitive Avalanche Energy	E _{AS}	T _J =25°C, I _{AS} =11A, L=1.2mH	76	mJ
Repetitive Avalanche Current	I _{AR}	I _{AS} decaying linearly to 0 in 1 μ sec Frequency limited by T _J max. V _A =1.5 × V _R	11	A

Electrical Characteristics:

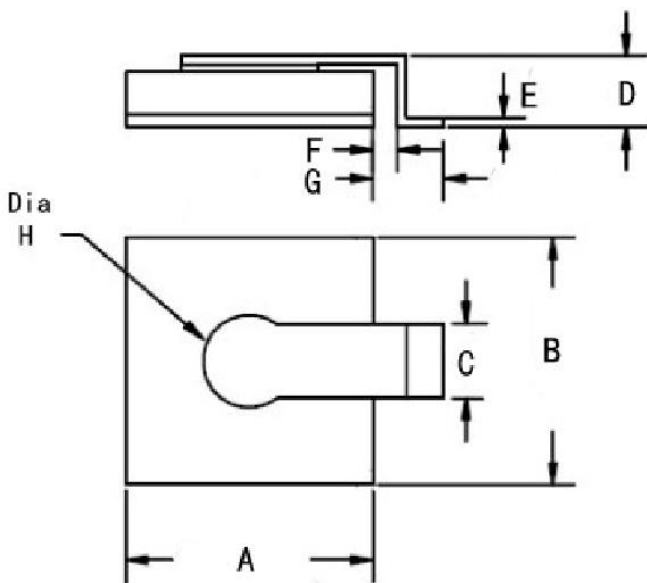
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V _{F1}	@ 120A, Pulse, T _J = 25 °C	0.58	0.60	V
	V _{F2}	@ 120A, Pulse, T _J = 125 °C	0.54	0.57	V
Reverse Current*	I _{R1}	@V _R = rated V _R , Pulse, T _J = 25 °C	0.3	9.0	mA
	I _{R2}	@V _R = rated V _R , Pulse, T _J = 125 °C	66	420	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	4333	4800	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	R _{θJC}	DC operation	0.20	°C/W

Mechanical Dimensions (Inches/Millimeters)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	11.08	11.78	0.436	0.464
B	11.08	11.78	0.436	0.464
C	4.93	5.23	0.194	0.206
D	2.57	3.37	0.101	0.133
E	0.20	0.60	0.008	0.024
F	1.02		0.040	
G	4.52		0.178	
H	5.59		0.220	

SPD-3A

Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

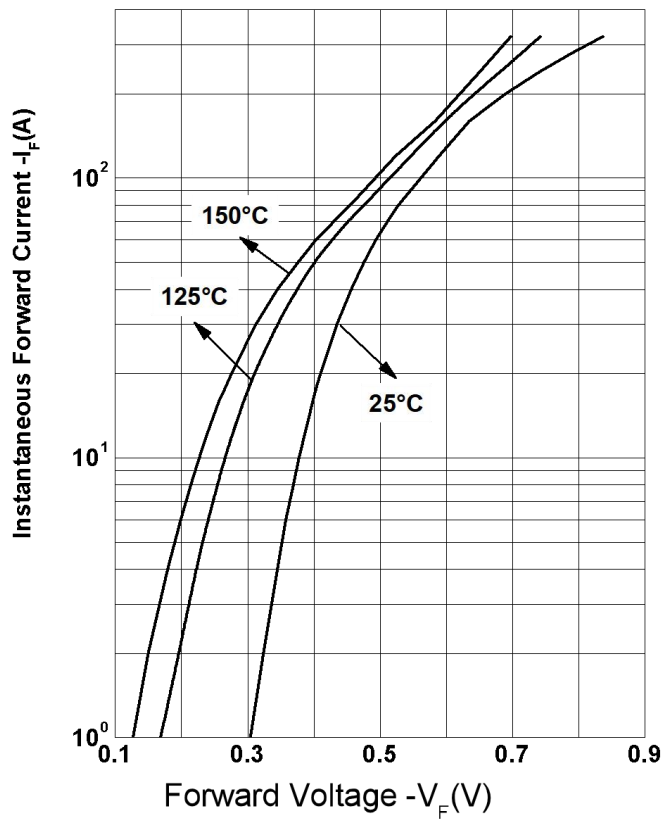


Figure 2
Typical Reverse Characteristics

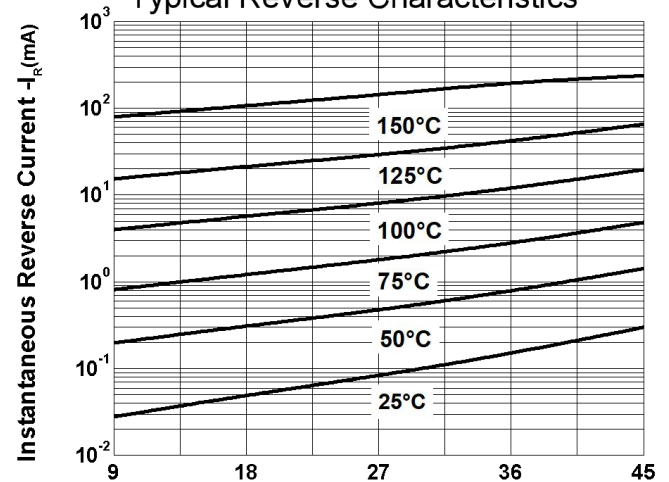
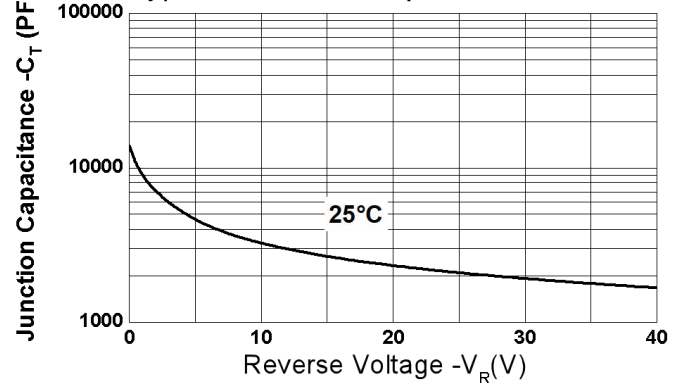


Figure 3
Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
120SPC045A	SPD-3A(Pb-Free)	100pcs/ box

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