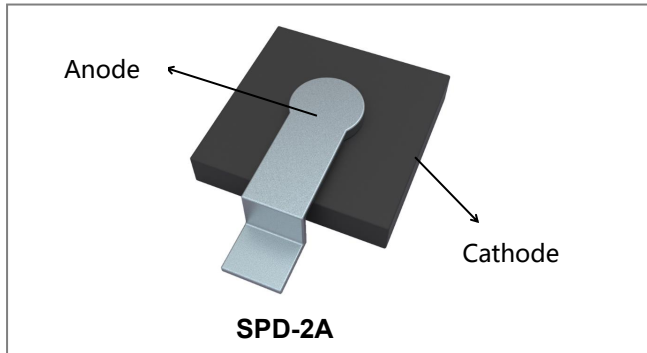


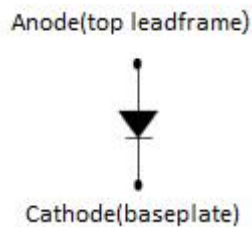
61SPB045A Power Surface Mount Schottky Rectifier



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
- 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	60	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	860	A
Non-Repetitive Avalanche Energy	E _{AS}	T _J =25°C, I _{AS} =8.0A, L=1.7mH	54	mJ
Repetitive Avalanche Current	I _{AR}	I _{AS} decaying linearly to 0 in 1μsec Frequency limited by T _J max. V _A =1.5 ×V _R	8.0	A

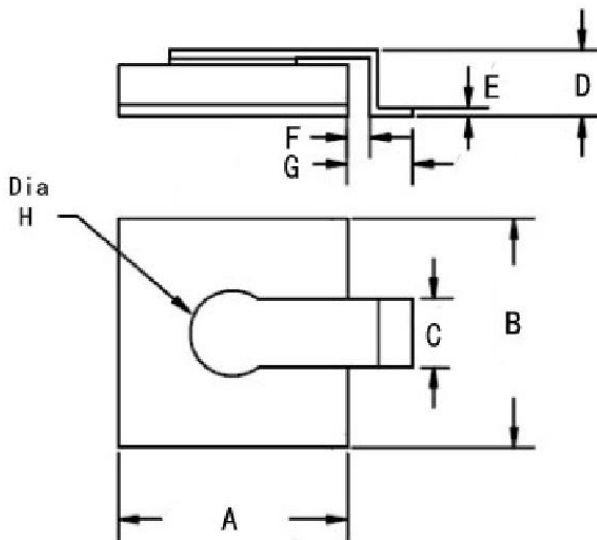
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_{F1}	@ 60A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.58	0.66	V
	V_{F2}	@ 60A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.55	0.59	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.2	1.2	mA
	I_{R2}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	33	45	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	2166	2400	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 +175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.37	$^\circ\text{C/W}$
Approximate Weight	wt	-	1.1	g

Mechanical Dimensions (Inches/Millimeters)


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	9.81	10.51	0.386	0.414
B	9.81	10.51	0.386	0.414
C	2.90	3.20	0.114	0.126
D	2.42	2.92	0.095	0.115
E	0.33	0.47	0.013	0.019
F	1.02		0.040	
G	4.02		0.158	
H	3.81		0.150	

SPD-2A

Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

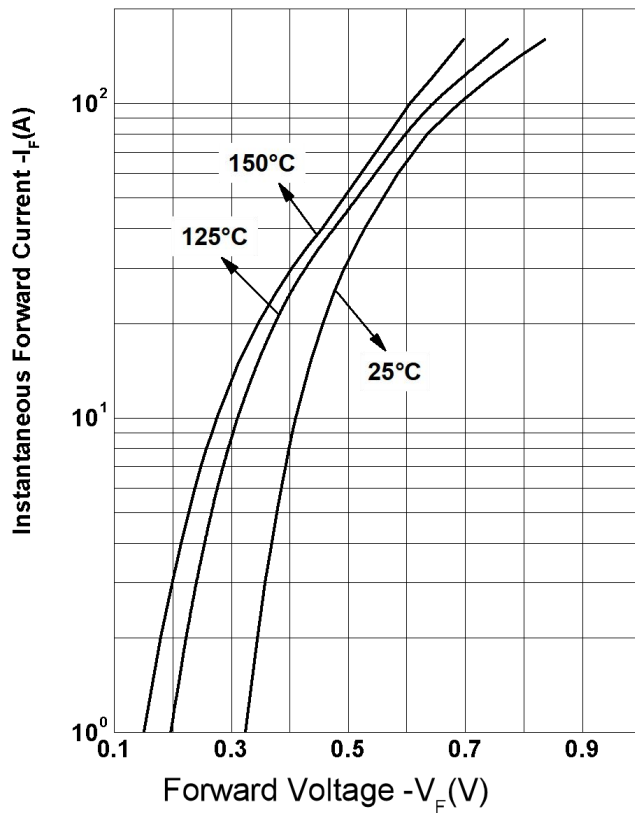


Figure 2
Typical Reverse Characteristics

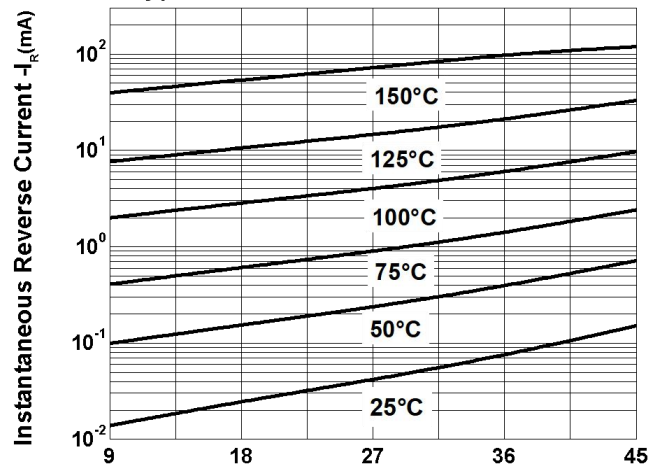
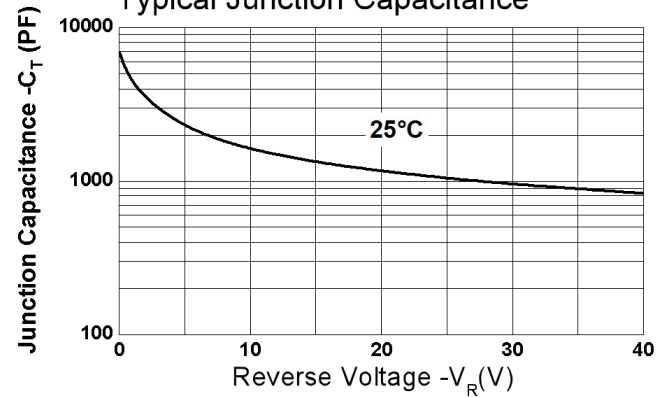


Figure 3
Reverse Voltage $-V_R$ (V)
Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
61SPB045A	SPD-2A(Pb-Free)	100pcs/ box

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