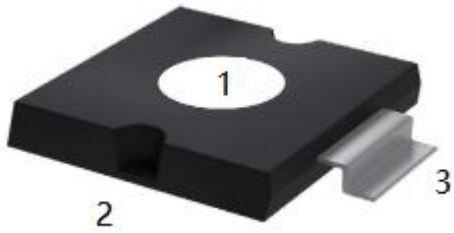
Technical Data
Data Sheet N1994, Rev. A

RoHS

Power Surface Mount Schottky Rectifier
(100V，60Amp)



Mini SPD-4

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	-	100	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℃, I_{AS}=0.75A, L=40mH	11.25	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decaying linearly to 0 in 1 μsec Frequency limited by T_J max. V_A=1.5 ×V_R	0.75	A

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Electrical Characteristics:

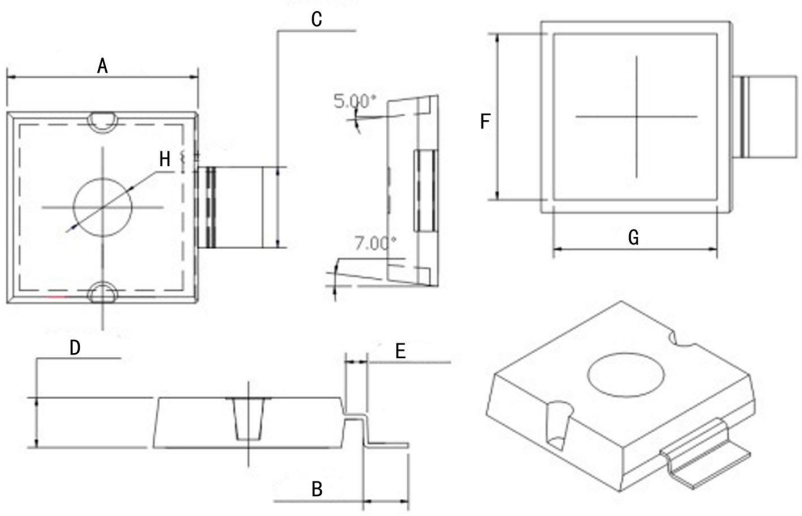
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_{F1}	@ 60A, Pulse, T_J = 25 °C	0.82	0.87	V
	V_{F2}	@ 60A, Pulse, T_J = 125 °C	0.71	0.76	V
Reverse Current*	I_{R1}	@V_R = rated V_R, Pulse, T_J = 25 °C	0.001	1.0	mA
	I_{R2}	@V_R = rated V_R, Pulse, T_J = 125 °C	0.6	24.0	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	1340	1500	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs

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

Thermal-Mechanical Specifications:

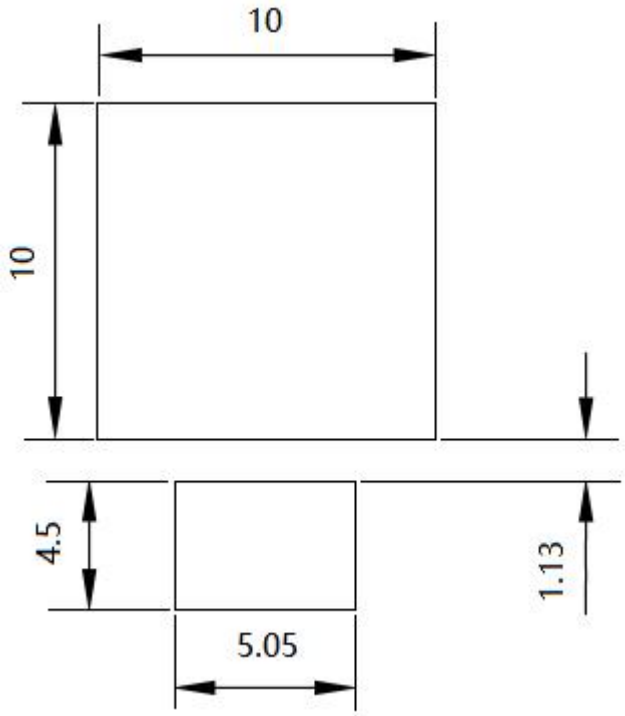
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	°C
Storage Temperature	T_{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.37	°C/W
Approximate Weight	wt	-	1.2	g

Mechanical Dimensions Mini SPD-4(Millimeters)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	9.86	10.46	0.388	0.412
B	2.15	4.15	0.085	0.163
C	2.75	3.35	0.108	0.132
D	3.15	3.75	0.124	0.148
E	0.63	1.63	0.025	0.064
F	9.00		0.354	
G	9.00		0.384	
H	3.80		0.150	

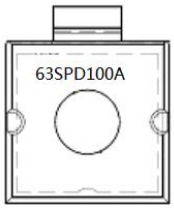
PAD Layout Recommend Size(Millimeters)



Ordering Information

Device	Package	Shipping
63SPD100A	Mini SPD-4 (Pb-Free)	64pcs/bag

Marking Diagram



63SPD100A = Part Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ratings and Characteristics Curves

Figure1
Typical Forward Characteristics

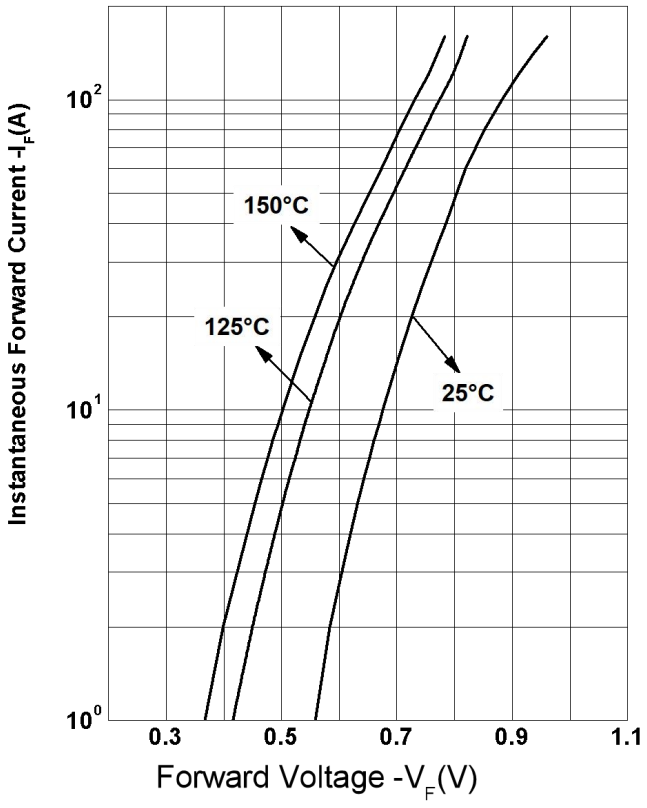


Figure 2
Typical Reverse Characteristics

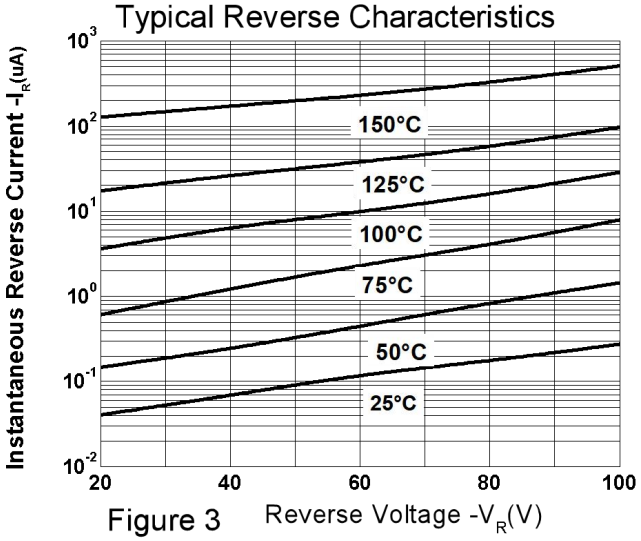
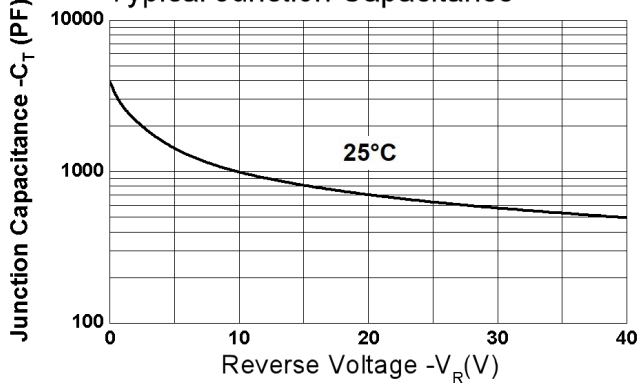


Figure 3
Typical Junction Capacitance



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