

Technical Data
Data Sheet N1883, Rev. -

Green Products

123SPD100A Power Surface Mount Schottky Rectifier

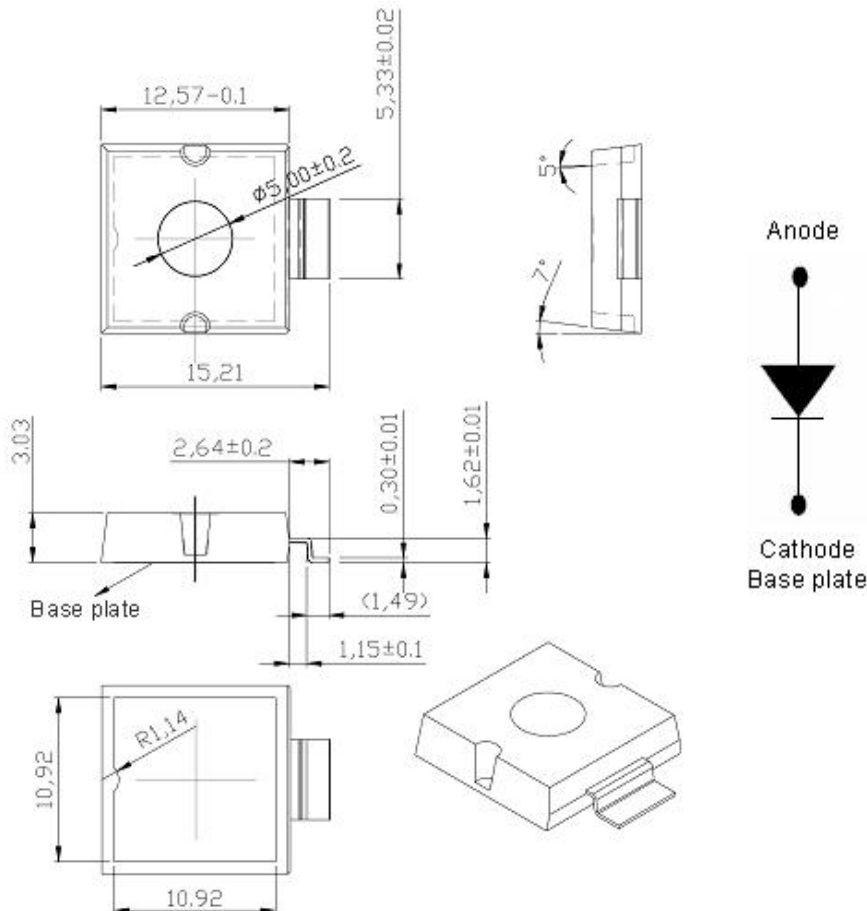
Applications:

- 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

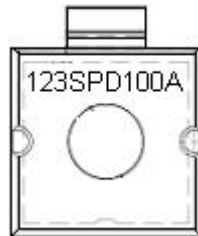
Mechanical Dimensions: In mm



SPD-4

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Marking Diagram:



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

Ordering Information:

Device	Package	Shipping
123SPD100A	SPD-4	64pcs / bag

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

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 Forward Current	$I_{F(AV)}$	50% duty cycle, 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}	$T_J=25^{\circ}C$, $I_{AS}=0.75A$, $L=40$ mH	11.25	mJ
Repetitive Avalanche Current	I_{AR}	I_{AS} decaying linearly to 0 in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$	0.75	A

Electrical Characteristics:

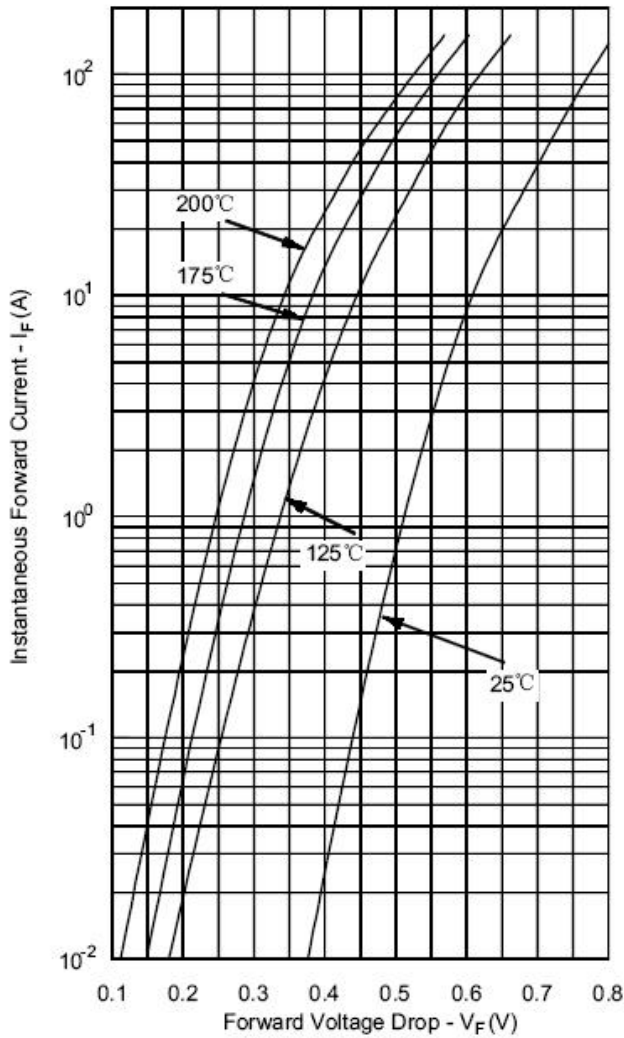
Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 120A, Pulse, T _J = 25 °C	0.87	V
	V _{F2}	@ 120A, Pulse, T _J = 125 °C	0.72	V
Reverse Current *	I _{R1}	@V _R = rated V _R T _J = 25 °C	2.0	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	48.0	mA
Junction Capacitance	C _J	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	3000	pF
Voltage Rated of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

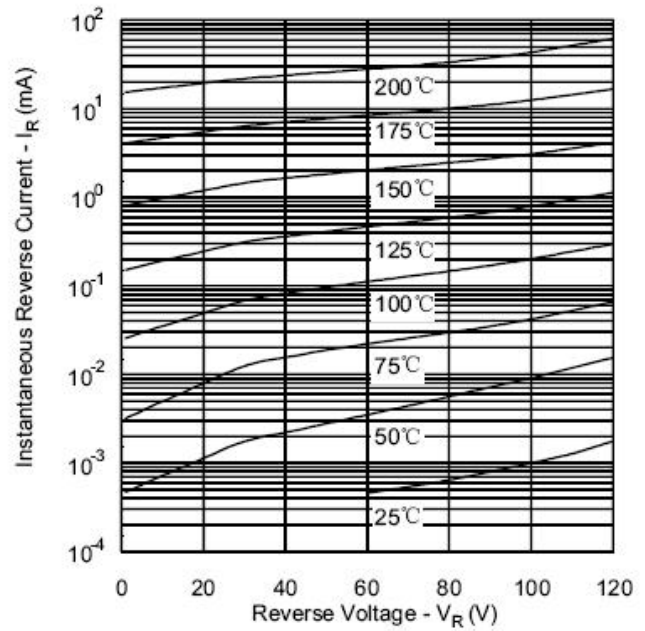
Thermal-Mechanical Specifications:

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 _{θJC}	DC operation	0.20	°C/W
Case Style	SPD-4			

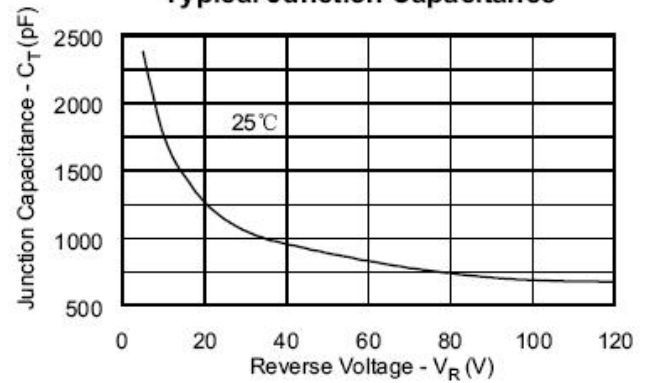
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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