

Power Surface Mount Schottky Rectifier (45V, 30Amp)

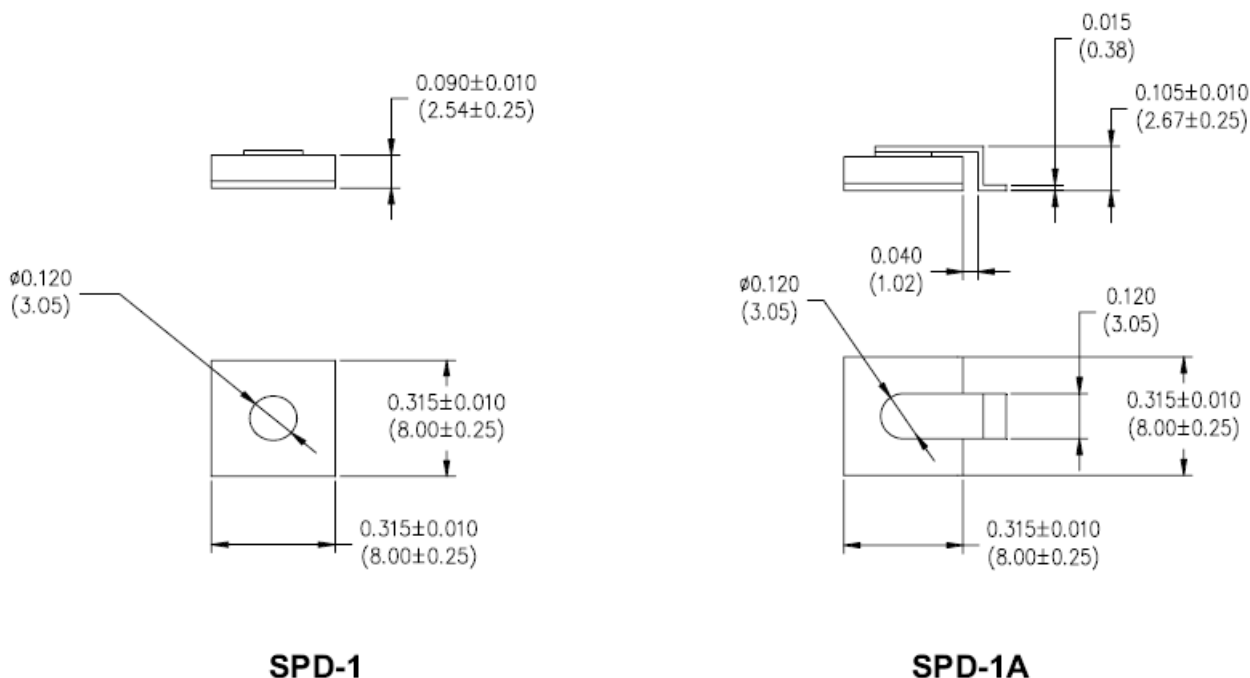
Applications:

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

Features:

- 175°C T_J operation
- Low reverse leakage current
- High surge capacities
- Low forward voltage drop
- High frequency operation
- 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



Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	45	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	570	A
Non-Repetitive Avalanche Energy	E_{AS}	$T_J=25^{\circ}C, I_{AS}=1.1A, L=60mH$	36	mJ
		$T_J=25^{\circ}C, I_{AS}=12.0A, L=0.10mH$	7.2	
Repetitive Avalanche Current	I_{AR}	Current decaying linearly to zero in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$ typical	6.0	A

Electrical Characteristics:

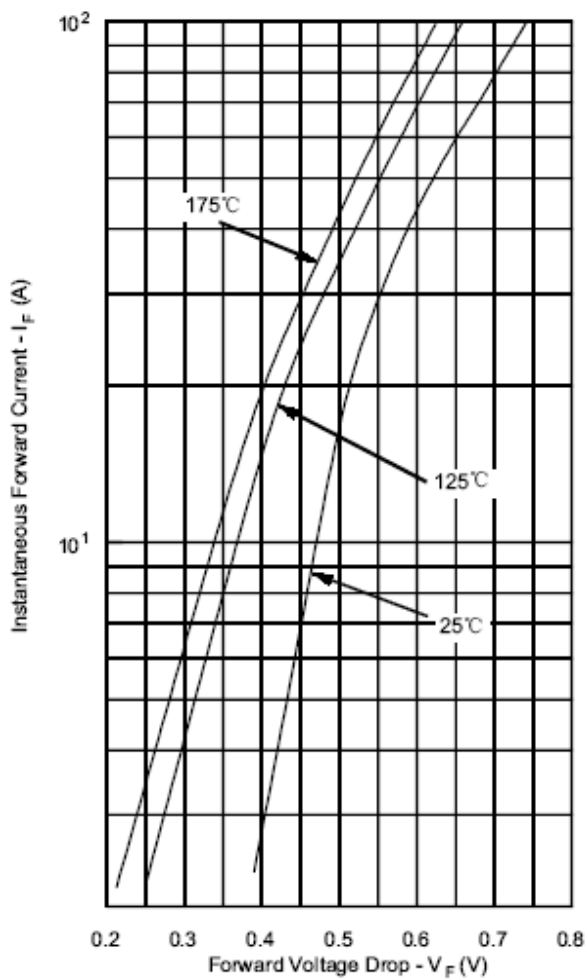
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 30A, Pulse, $T_J = 25^{\circ}C$	0.64	V
	V_{F2}	@ 30A, Pulse, $T_J = 125^{\circ}C$	0.57	V
Max. Reverse Current*	I_{R1}	@ $V_R = 45V$, $T_J = 25^{\circ}C$	0.80	mA
	I_{R2}	@ $V_R = 45V$, $T_J = 125^{\circ}C$	30	mA
Max. Junction Capacitance	C_T	@ $V_R = 5V, T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$, $V_{SIG}=50mV(p-p)$	1600	pF

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

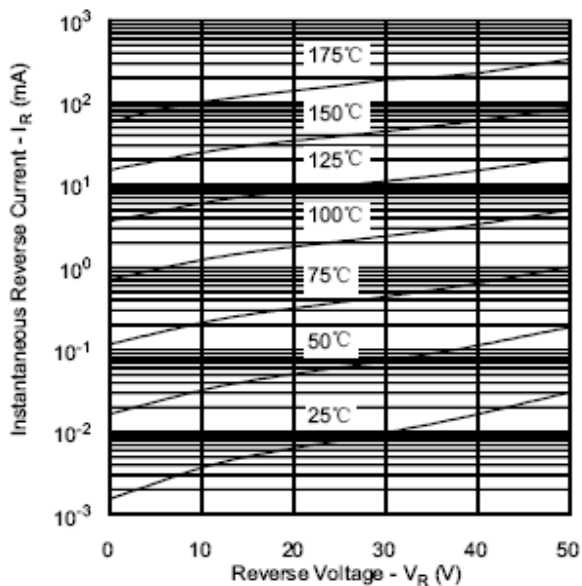
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.50	$^{\circ}C/W$
Case Style	SPD-1/A			

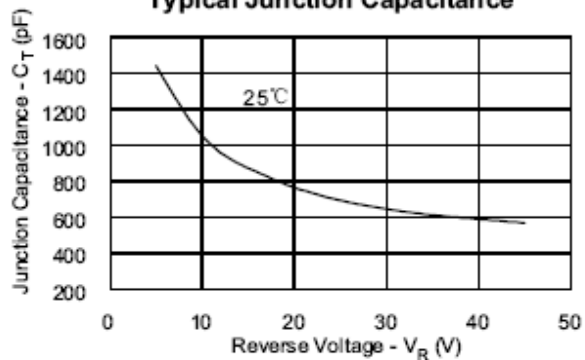
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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