Technical Data *Green Products*
Data Sheet N1114, Rev. A

SK510A SCHOTTKY RECTIFIER

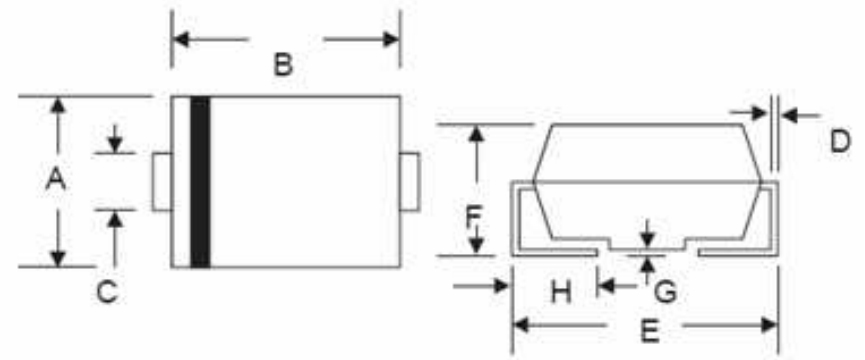
Applications:

- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**
- **Disk drives**
- **Battery charging**

Features:

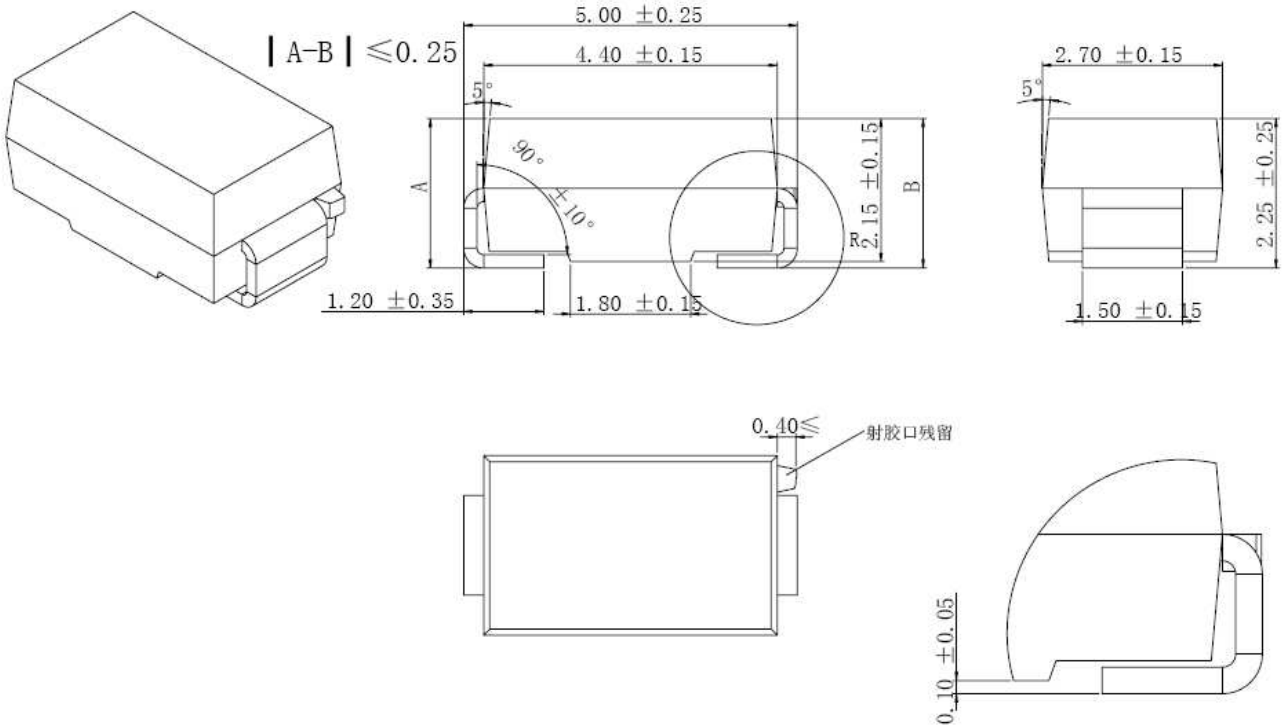
- **150℃ TJ operation Center tap configuration**
- **Low forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **This is 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



SMA/DO-214AC				
Dim	Min	Max	Min	Max
A	2.50	2.90	0.098	0.114
B	4.00	4.60	0.157	0.181
C	1.40	1.60	0.055	0.063
D	0.152	0.305	0.006	0.012
E	4.80	5.28	0.189	0.208
F	2.00	2.44	0.079	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060
	In mm		In inch	

OPTION 1



OPTION 2(JK)

SMA

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Marking Diagram:

Where XXXXX is YYWWL

SK	= Device Type
5	= Forward Current (5A)
10	= Reverse Voltage (100V)
A	= Package type
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
SK510A	SMA (Pb-Free)	5000pcs / reel

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 Inverse Voltage	V_{RWM}	-	100	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =115℃, rectangular wave form	5	A
Max. peak one cycle Non-repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	120	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25 °C	0.85	V
	V_{F2}	@ 5 A, Pulse, T_J = 125 °C	0.70	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated VR T_J = 25 °C	0.1	mA
	I_{R2}	@V_R = rated VR T_J = 100 °C	2.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 4V, T_C = 25 °C f_{SIG} = 1MHz	200	pF
Max. Voltage Rate of Change	dv/dt	-	10,000	V/us

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	°C
Max. Storage Temperature	T_{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	17	°C/W
Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	75	°C/W
Approximate Weight	wt	-	0.11	g
Case Style	SMA			

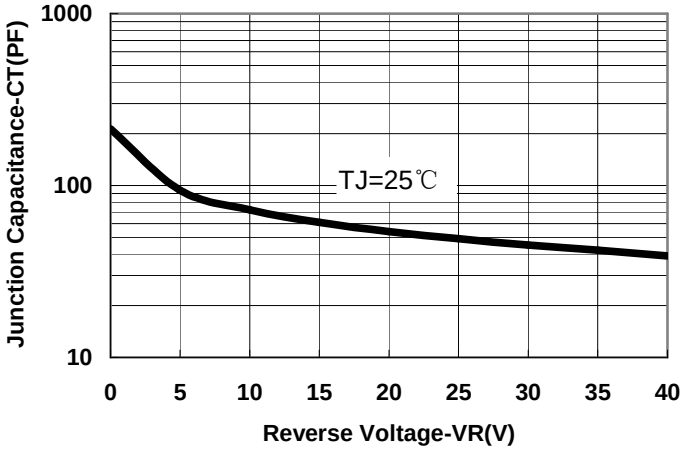

Fig.1-Typical Junction Capacitance Vs. Reverse Voltage

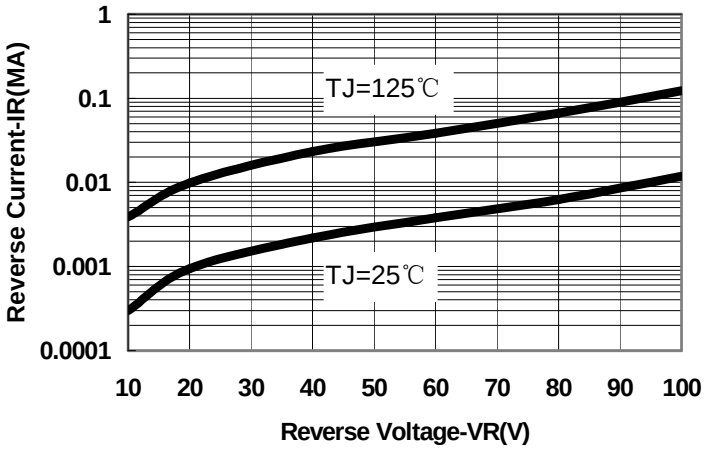

Fig.2-Typical Values Of Reverse Current Vs. Reverse Voltage

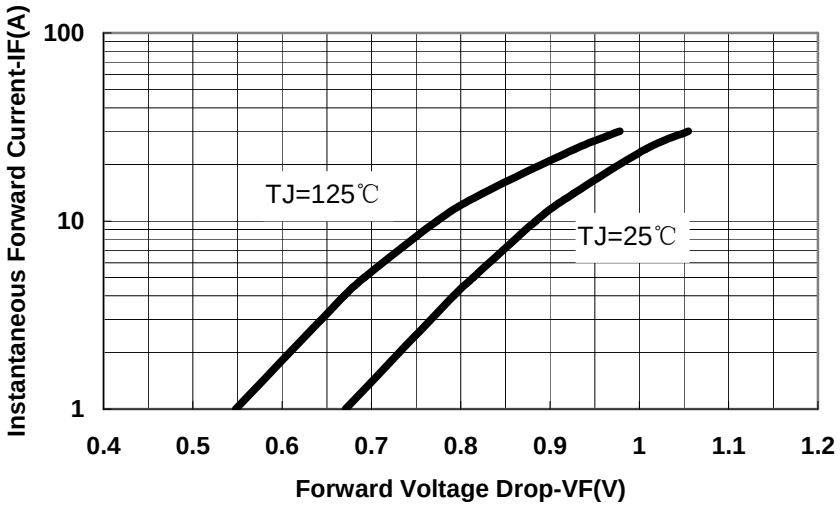

Fig.3-Typical Forward Voltage Drop Characteristics

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