

## SK810 SCHOTTKY RECTIFIER

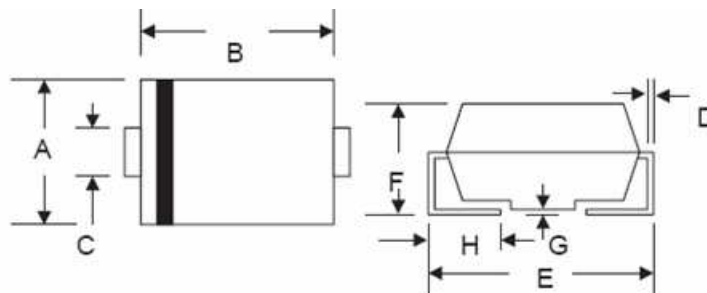
### Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Features:

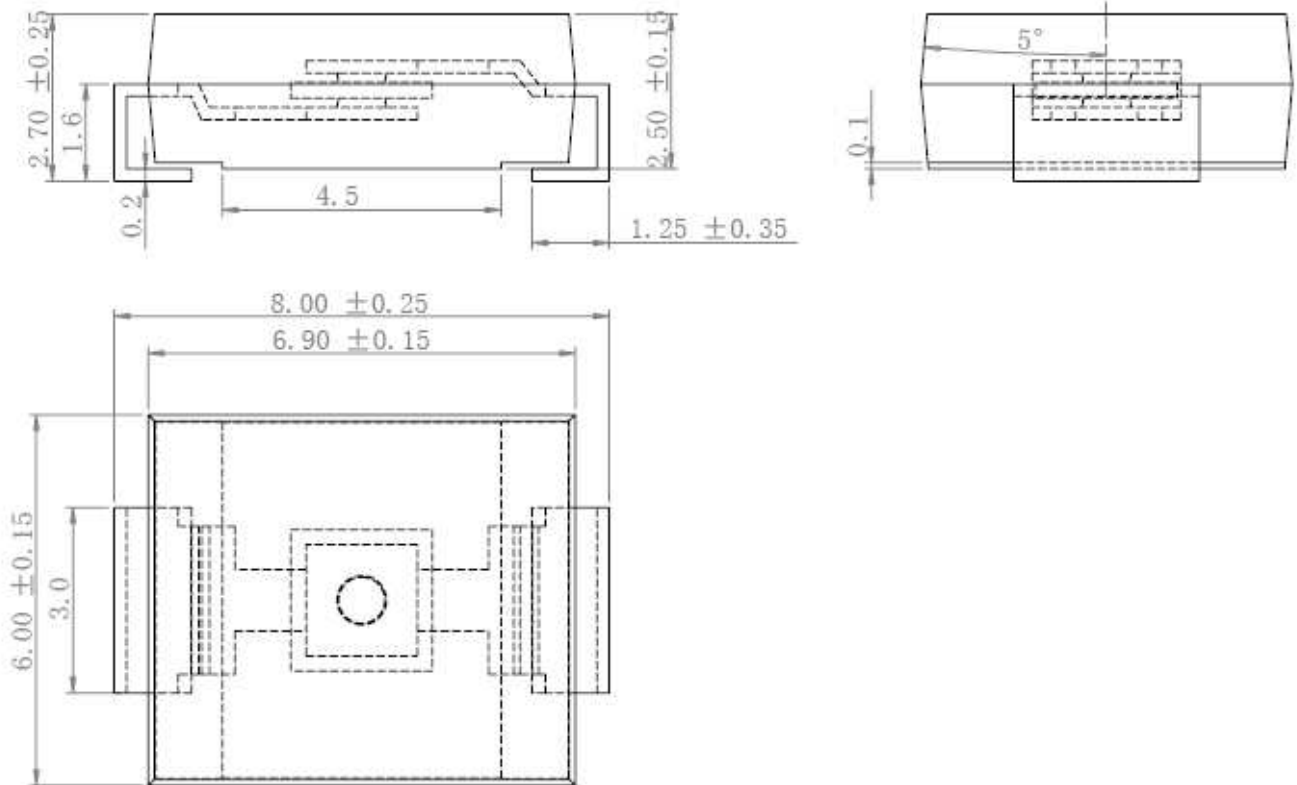
- Small foot print, surface mountable
- Very low forward Voltage Drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance the ROHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions (In mm)



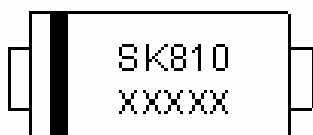
SMC/DO-214AB				
Dim	Min	Max	Min	Max
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.13	0.305	0.320
F	2.00	2.62	0.079	0.103
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.030	0.05
In mm			In inch	

### OPTION 1



**OPTION 2(JK)**

**SMC**

**Marking Diagram:**


Where XXXXX is YYWWL

SK810	= Part Name
YY	= Year
WW	= Week
L	= Lot Number

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

**Ordering Information**

Device	Package	Shipping
SK810	SMC (Pb-Free)	3000pcs / 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 @ $T_C = 95^\circ\text{C}$ , rectangular wave form	8	A
Max. peak one cycle Non-repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	200	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_{F1}$	@ 8A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.80	V
	$V_{F2}$	@ 8A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.70	V
Max. Reverse Current (per leg)*	$I_{R1}$	@ $V_R = \text{rated VR}$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated VR}$ $T_J = 100\text{ }^\circ\text{C}$	20	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	400	pF
Max. Voltage Rate of Change	dv/dt	-	10,000	V/us

\* Pulse Width < 300 $\mu$ s, Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	20	$^\circ\text{C/W}$
Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	84	$^\circ\text{C/W}$
Approximate Weight	Wt	-	0.65	
Case Style	SMC			

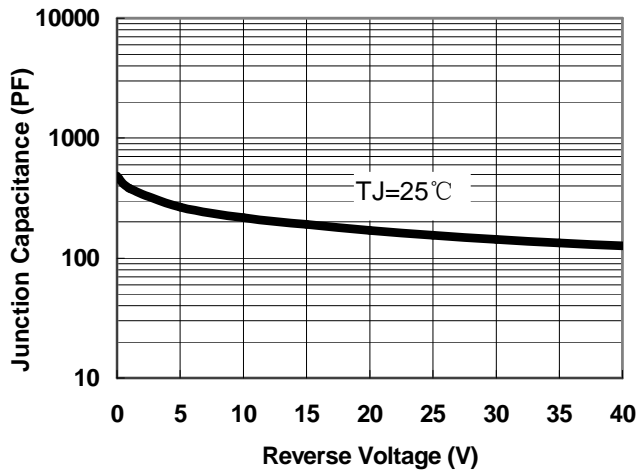


Fig.1-Typical Junction Capacitance

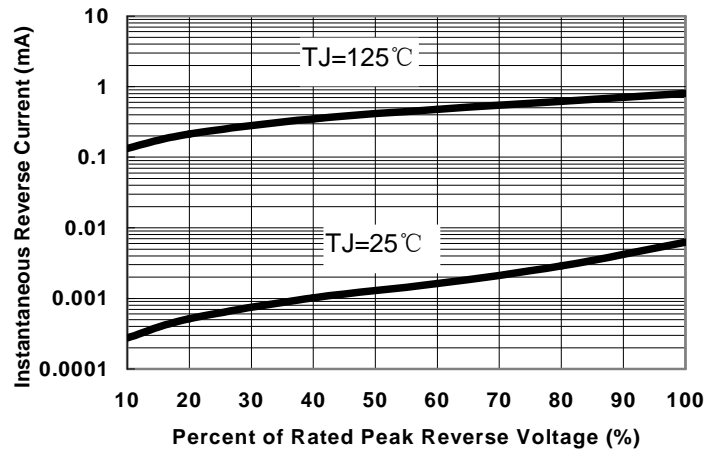


Fig.2-Typical Reverse Characteristics

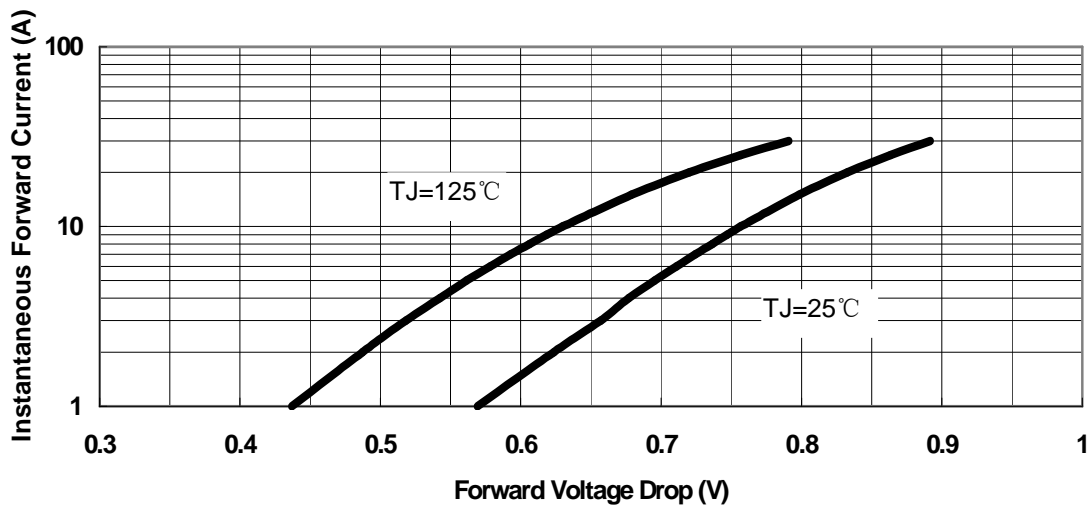


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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