

SK510 SCHOTTKY RECTIFIER

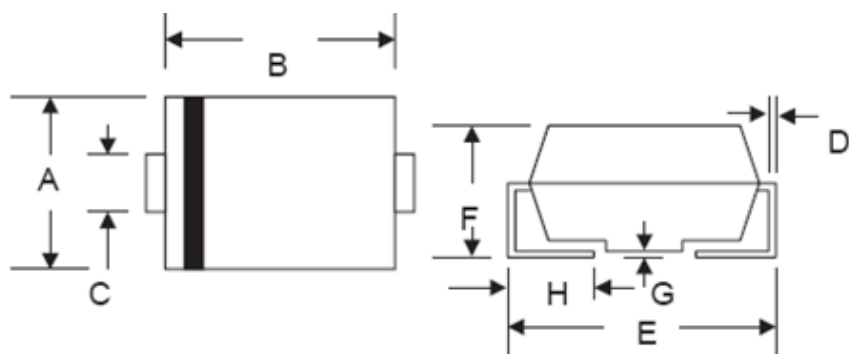
Applications:

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

Features:

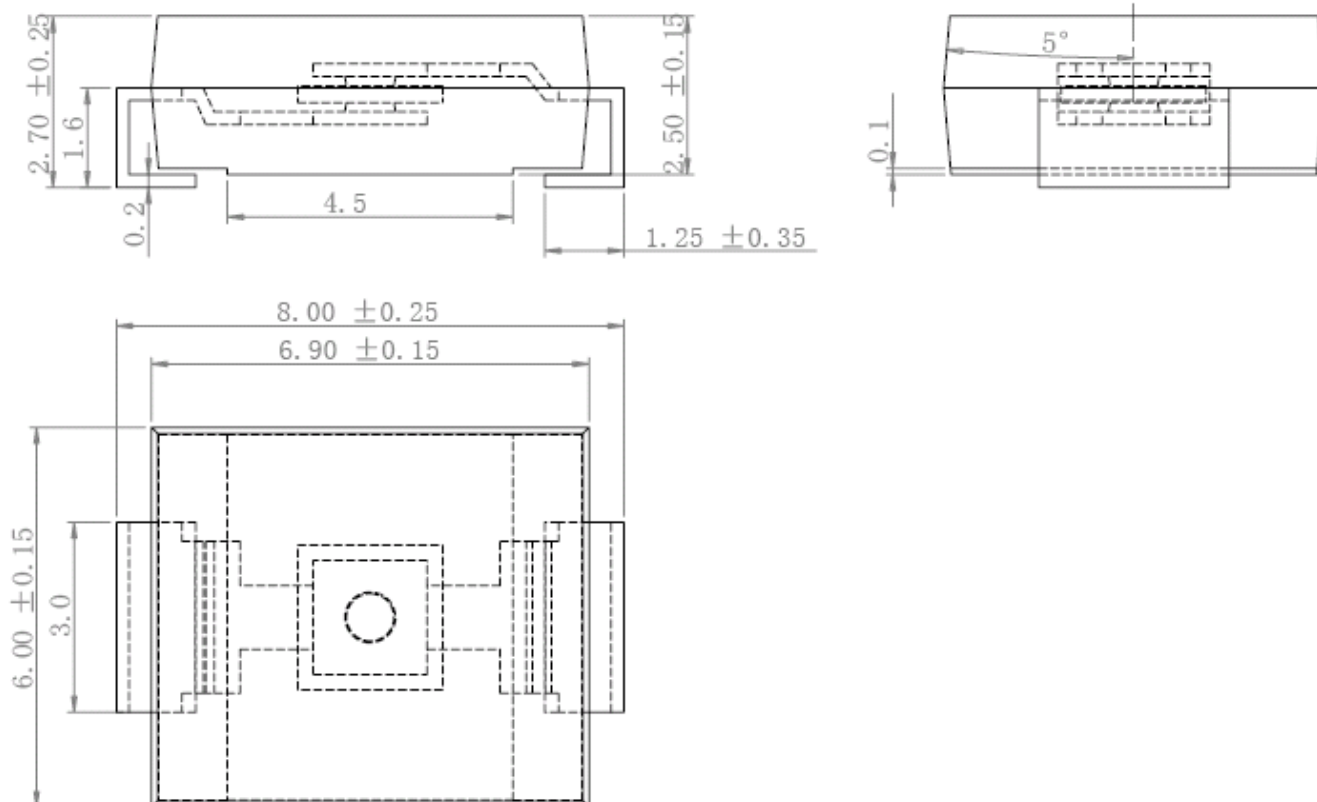
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions: In Inches / mm



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	

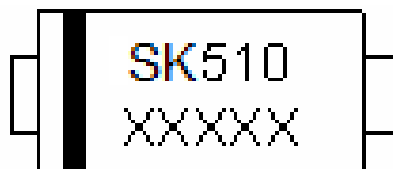
OPTION 1



OPTION 2(JK)

SMC

Marking Diagram:



Where XXXXX is YYWWL

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

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

Ordering Information:

Device	Package	Shipping
SK510	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
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 115^\circ\text{C}$, rectangular wave form	5	A
Peak one Cycle Non-repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	120	A



Electrical Characteristics:

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

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	17	$^{\circ}\text{C/W}$
Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	75	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.68	g
Case Style	SMC			

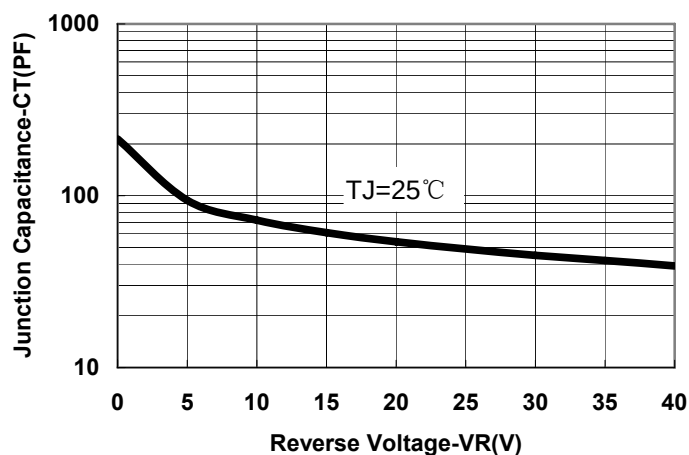


Fig.1-Typical Junction Capacitance Vs. Reverse Voltage

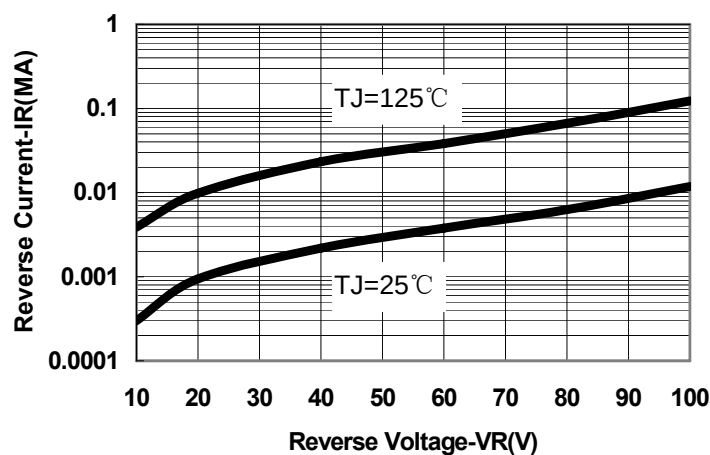


Fig.2-Typical Values Of Reverse Current Vs. Reverse Voltage

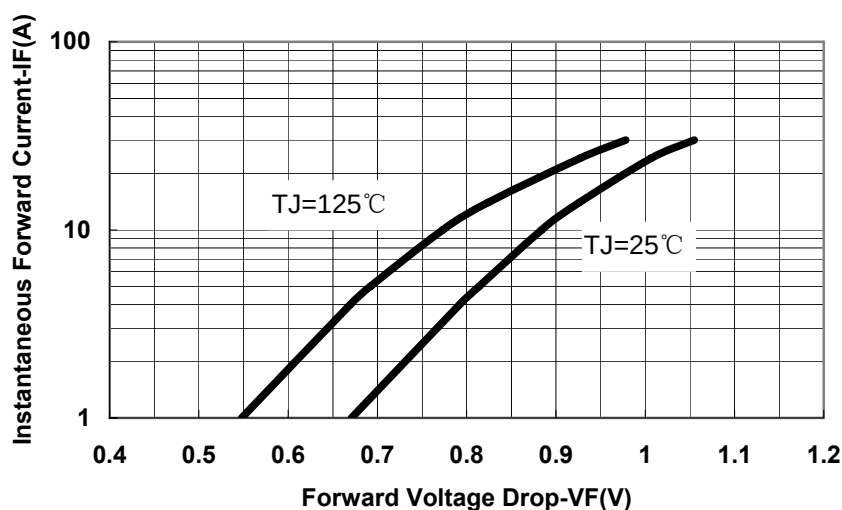


Fig.3-Typical Forward Voltage Drop Characteristics



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