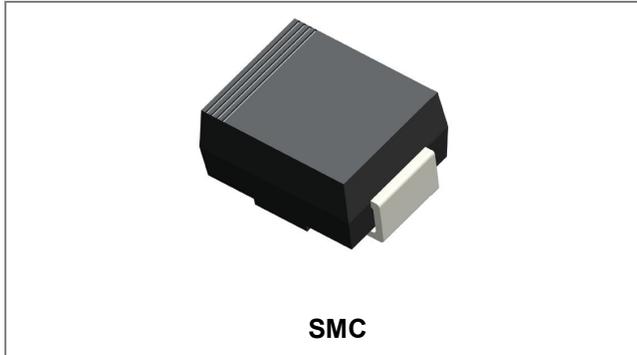


SK38 SCHOTTKY RECTIFIER



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- Terminals finish: Tin Lead-free plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: Low Profile Molded plastic
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band or cathode Notch
- Mounting Position: Any
- Weight: 0.21grams(approx)

Maximum Ratings(limiting values, $T_c = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	80	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L=75^\circ\text{C}$, rectangular wave form	3	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	110	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 3A, Pulse, $T_J = 25^\circ\text{C}$	0.77	0.79	V
	V_{F2}	@ 3A, Pulse, $T_J = 125^\circ\text{C}$	0.63	0.74	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.0001	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	0.04	30.0	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	92	250	pF
Series Inductance	L_S	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/ μs

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JA}$	DC operation	55	°C/W
Approximate Weight	wt	-	0.21	g

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

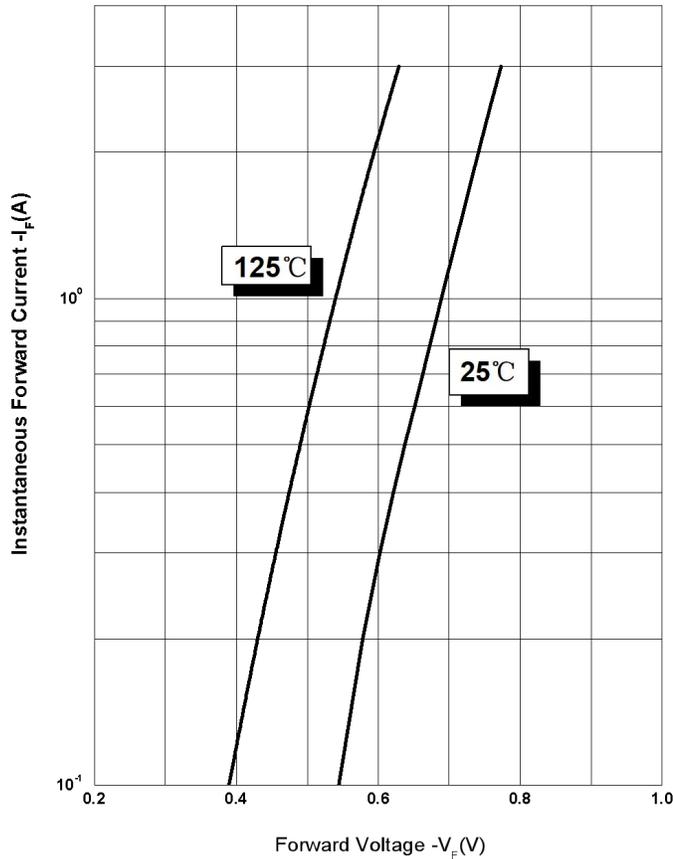


Figure 2 Typical Reverse Characteristics

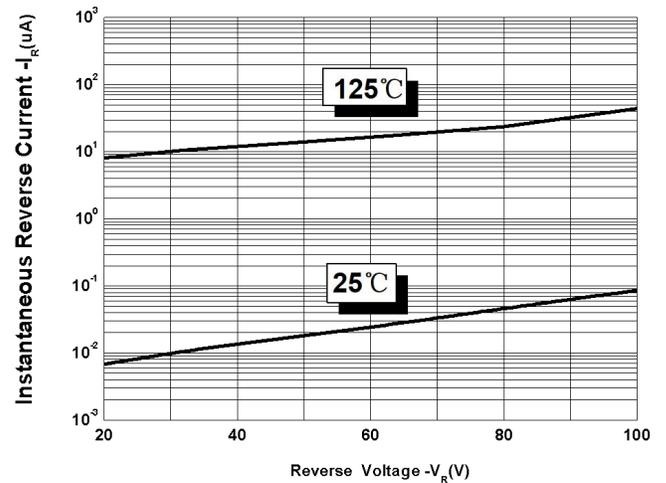
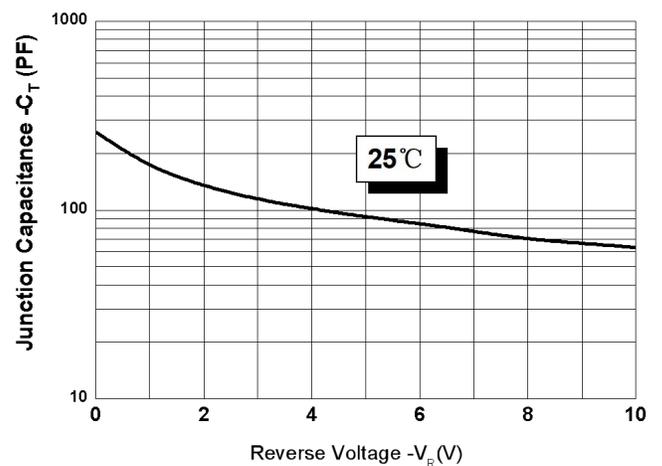
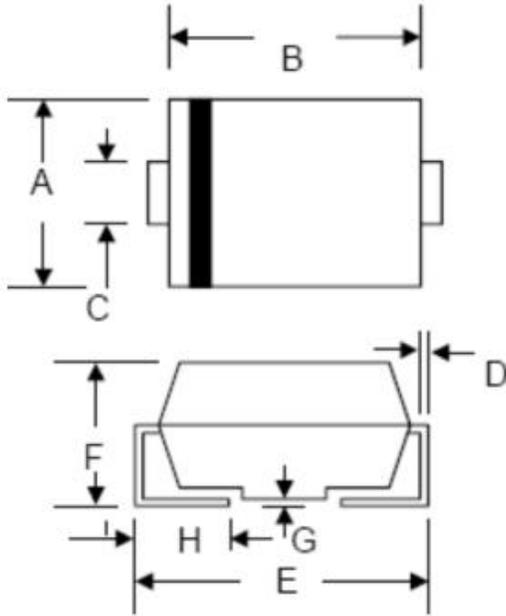


Figure 3 Typical Junction Capacitance



Mechanical Dimensions SMC



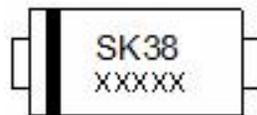
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.25	0.305	0.325
F	2.00	2.95	0.079	0.116
G	0.051	0.203	0.002	0.008
H	0.76	1.60	0.030	0.063

Ordering Information

Device	Package	Shipping
SK38	SMC (Pb-Free)	3000pcs / reel
SK38TR	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.

Marking Diagram

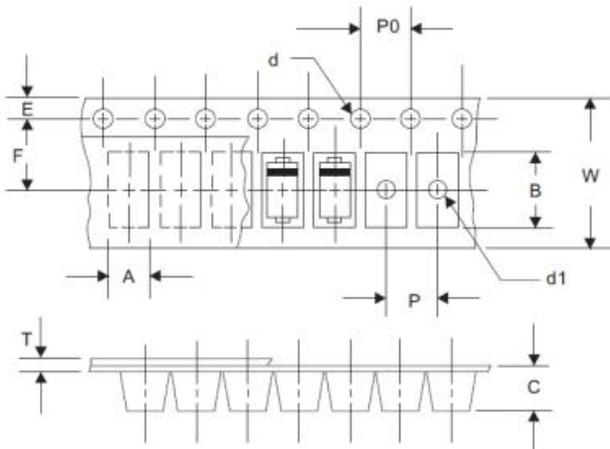


Where XXXXX is YYWWL

- SK = Device Type
- 3 = Forward Current (3A)
- 8 = Reverse Voltage (80V)
- YY = Year
- WW = Week
- L = Lot Number

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

Carrier Tape Specification SMC



SYMBOL	Millimeters	
	Min.	Max.
A	5.95	6.15
B	8.10	8.30
C	2.60	2.80
d	1.40	1.60
E	1.65	1.85
F	7.40	7.60
P	7.90	8.10
P0	3.90	4.10
T	0.20	0.40
W	15.70	16.30



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