

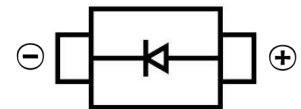
SCHOTTKY BARRIER DIODE

FEATURES

- Small Surface Mount device
- Low forward voltage drop
- Ultra-fast reverse recovery time
- Low power losses, high efficiency
- High surge current capability



SMC



MECHANICAL DATA

- Case: SMC(DO-214AB)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.21 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SK82	SK83	SK84	SK85	SK86	SK88	SK810	Unit
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
RMS Reverse Voltage	V_{RMS}	14	21	28	35	42	56	70	V
DC Reverse Voltage	V_R	20	30	40	50	60	80	100	V
Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$	I_{FSM}	200							A
Maximum Average Forward Rectified Current	I_F	8.0							A
Thermal Resistance From Junction To Ambient	$R_{\theta JL}$	20							$^\circ\text{C/W}$
Junction Temperature	T_J	-65 ~+150							$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~+150							$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	SK82	SK83	SK84	SK85	SK86	SK88	SK810	Unit	Conditions	
Forward voltage	V_F	0.50	0.55	0.70	0.85				V	$I_F=8\text{A}$	
Reverse current $T_A=25^\circ\text{C}$	I_R	1.0								mA	$V=V_R$
Reverse current $T_A=100^\circ\text{C}$	I_R	20.0									
Junction capacitance	C_J	400								pF	$V_R=4\text{V}, f=1\text{MHZ}$

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Typical Characteristics

Fig.1 Forward Current Derating Curve

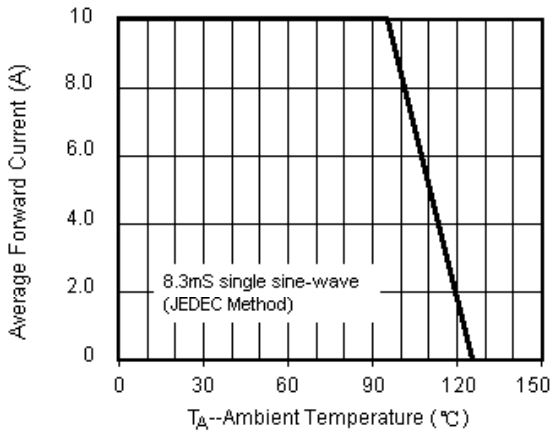


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

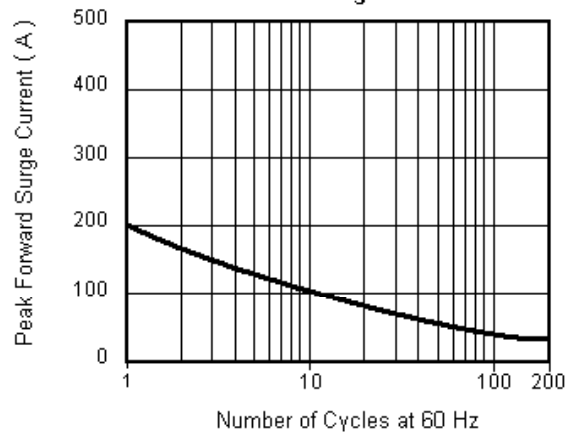


Fig.3 Typical Instantaneous Forward Characteristics

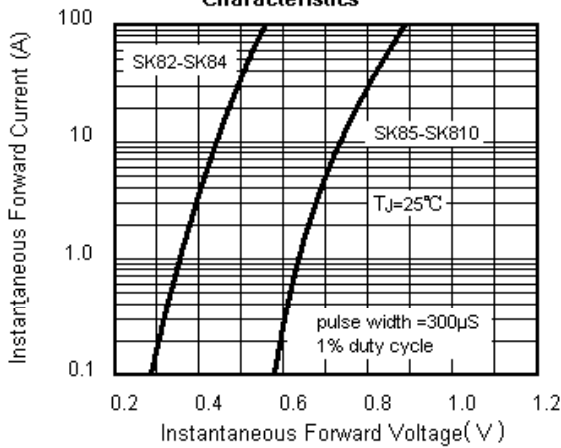


Fig.4 Typical Reverse Leakage Characteristics

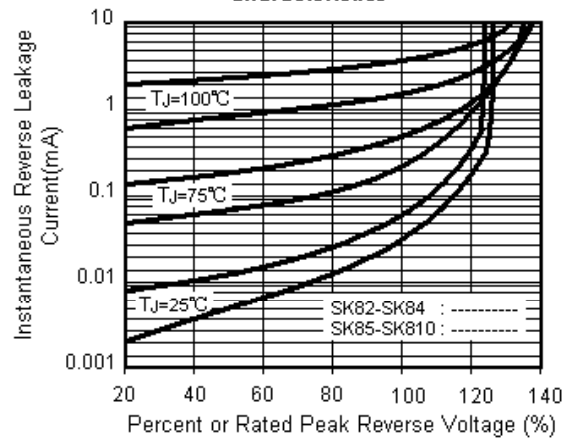
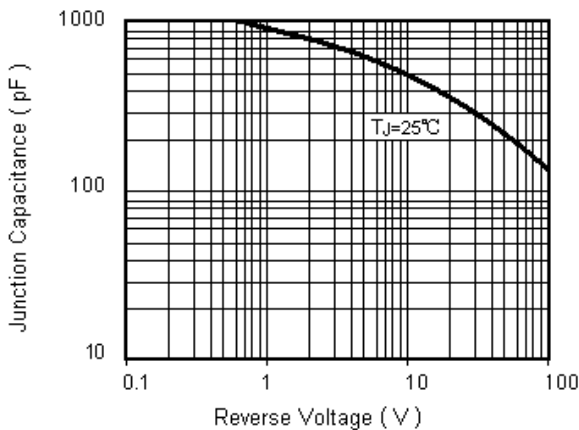
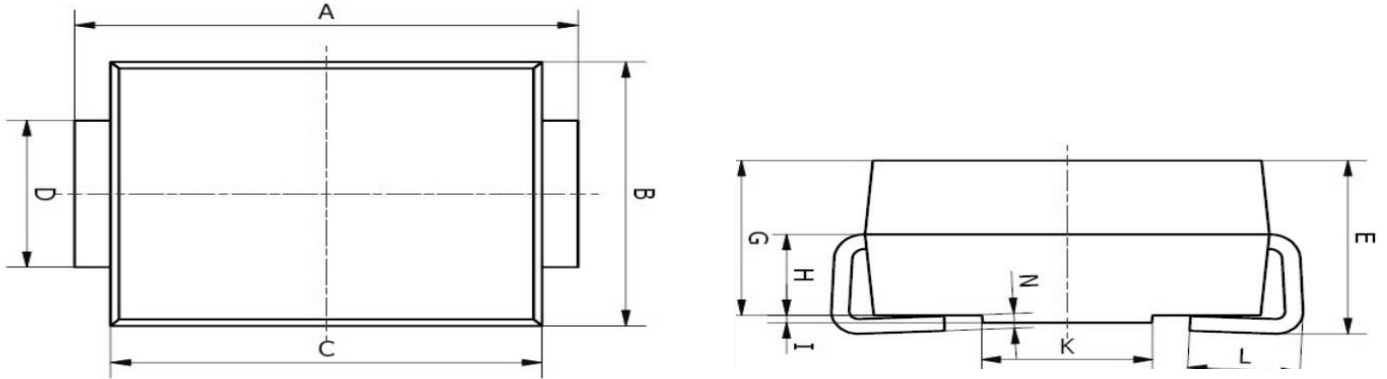


Fig.5 Typical Junction Capacitance



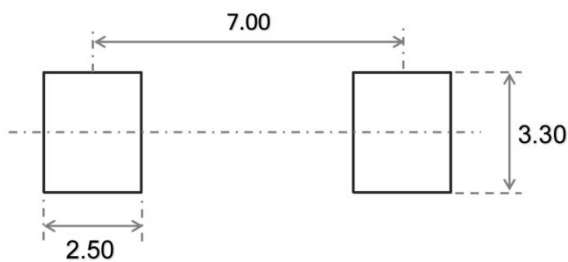
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SMC Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	7.75	8.13	0.305	0.320
B	5.59	6.22	0.220	0.245
C	6.60	7.11	0.260	0.280
D	2.75	3.25	0.108	0.128
E	2.25	2.82	0.089	0.111
G	2.00	2.62	0.079	0.103
H	1.26	1.56	0.050	0.061
I	0.05	0.15	0.002	0.006
K	4.30	6.00	0.169	0.236
L	1.25	1.75	0.049	0.069
N	0.10	0.30	0.004	0.012

SMC Suggested Pad Layout



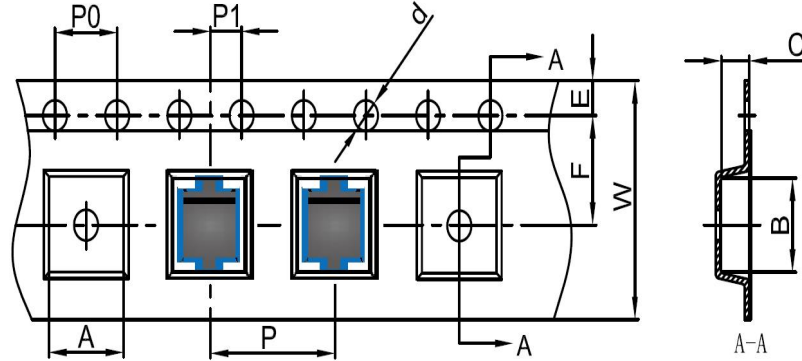
Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

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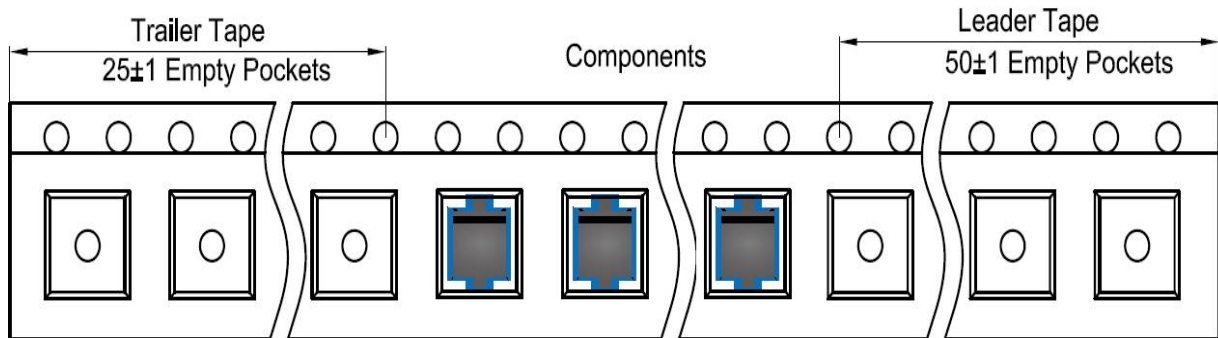
SMC Tape and Reel

SMC Embossed Carrier Tape

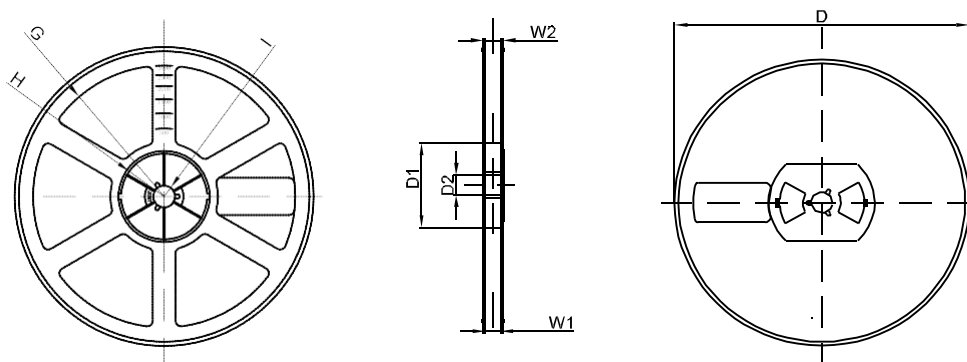


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMC	6.3	8.25	2.90	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMC Tape Leader and Trailer



SMC Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330	100	21	R165	R50	R6.50	16.4	21.00
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1