

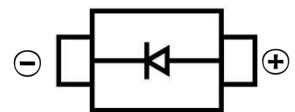
SCHOTTKY BARRIER RECTIFIER

FEATURES

- Excellent Ability to Withstand Reverse Avalanche Energy Transients
- Guard-Ring for Stress Protection
- For low voltage, high frequency rectification applications
- For free wheeling and polarity protection diodes applications
- Surface Mount device



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	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
DC Blocking Reverse Voltage	V_R	40	V
Maximum Working Peak Reverse Voltage	V_{RWM}	40	V
Maximum Average Forward Rectified Current	I_F	5	A
Non-Repetitive Peak Forward Surge Current @ $t_{@}=8.3\text{ms}$	I_{FSM}	190	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	111	$^{\circ}\text{C/W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	12	$^{\circ}\text{C/W}$
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	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F^*			0.5	V	$I_F=5\text{A}$
Reverse current	I_R^*			0.3	mA	$V_R=40\text{V}$, $T_J = 25^{\circ}\text{C}$
Reverse current	$I_{R(H)}^*$			15	mA	$V_R=40\text{V}$, $T_J = 125^{\circ}\text{C}$

* Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

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Typical Characteristics

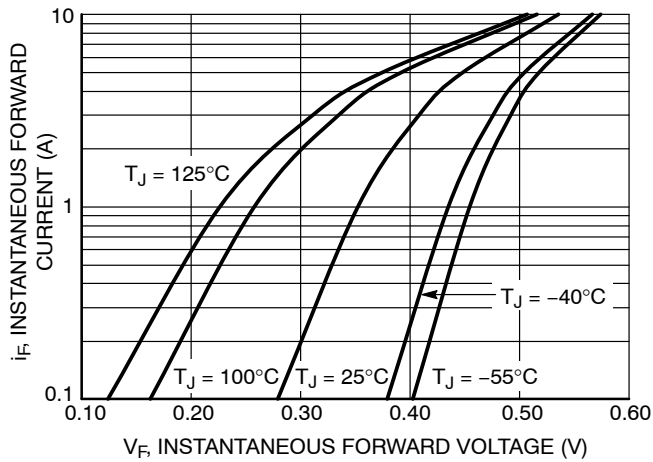


Figure 1. Typical Forward Voltage

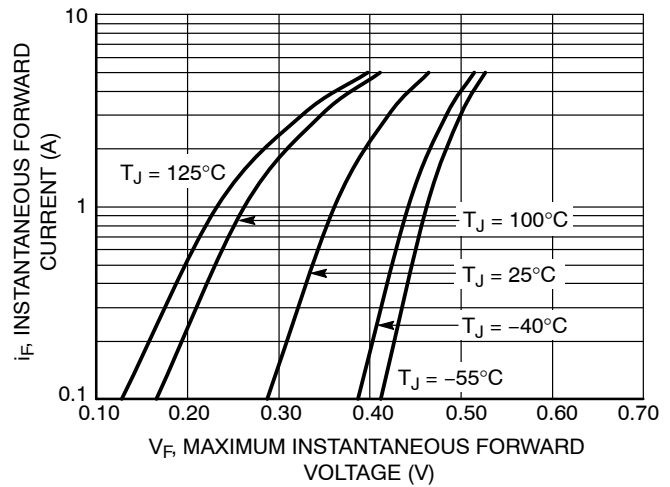


Figure 2. Maximum Forward Voltage

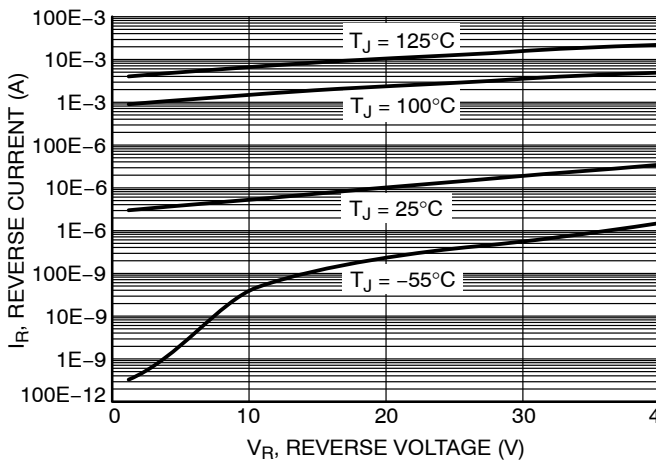


Figure 3. Typical Reverse Current

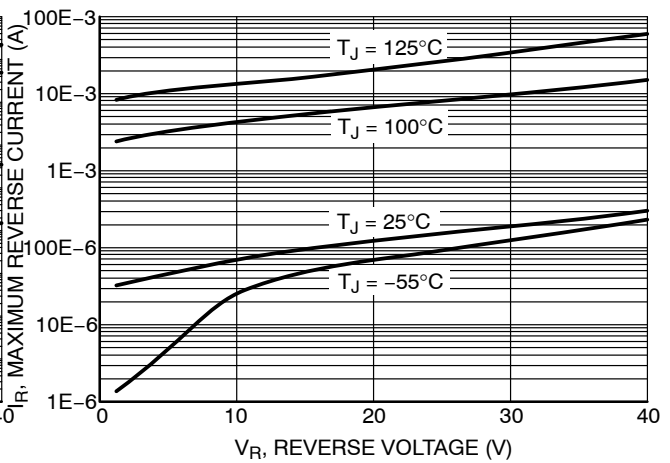


Figure 4. Maximum Reverse Current

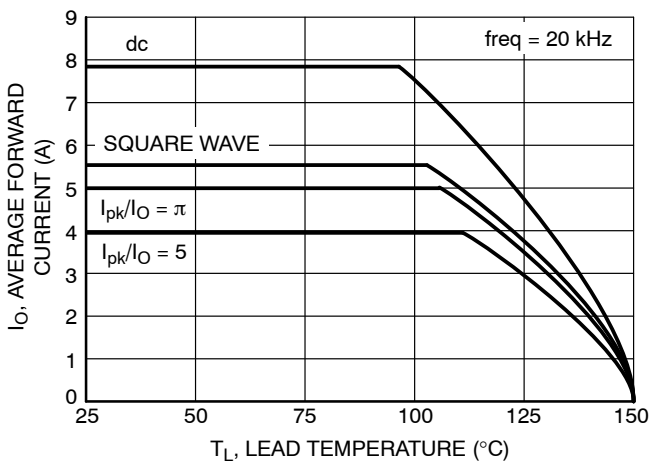


Figure 5. Current Derating

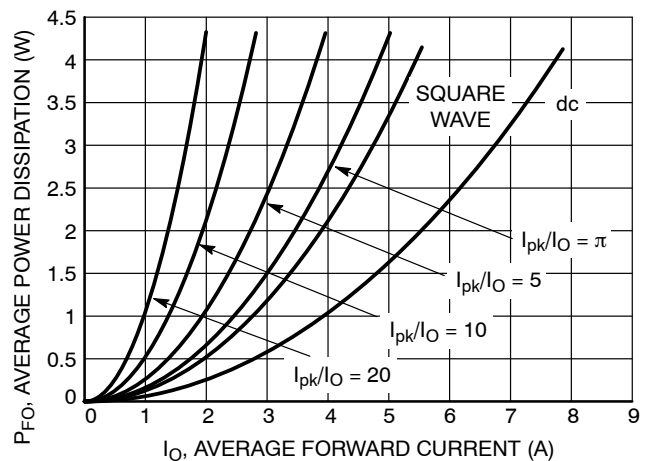
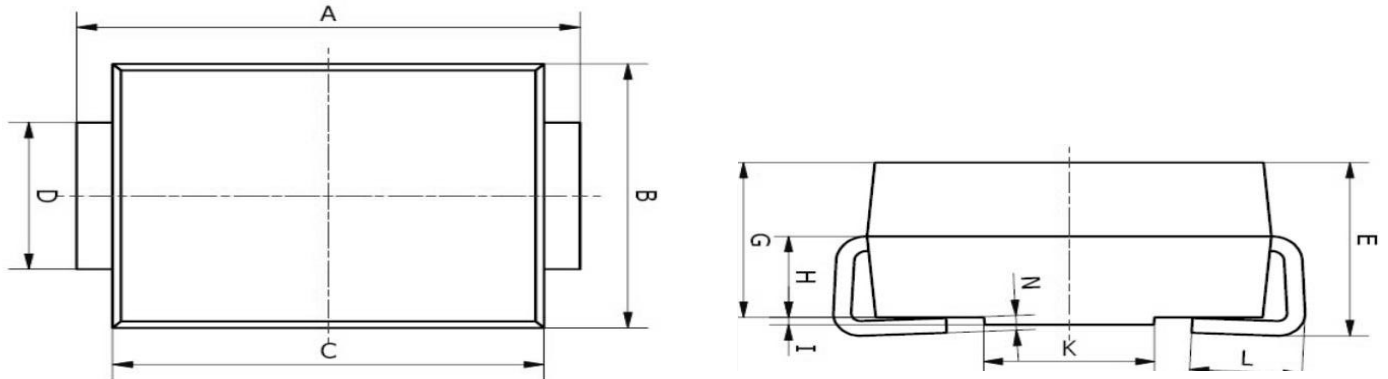


Figure 6. Forward Power Dissipation

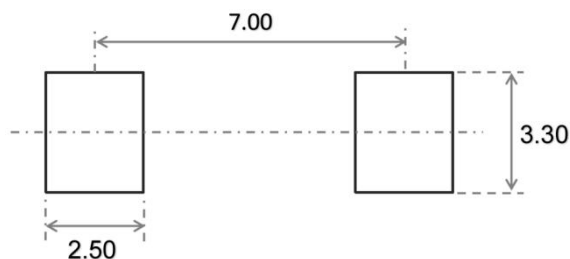
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SMC Package Outline Dimensions



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



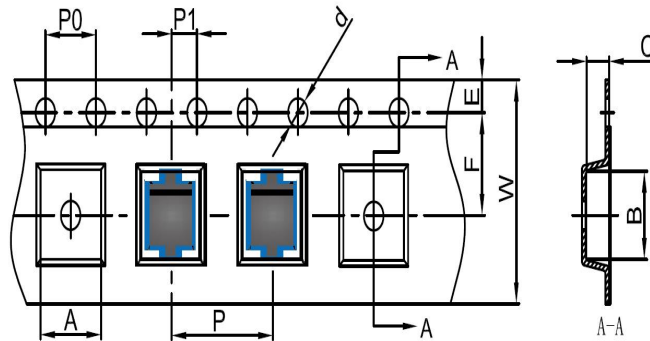
Note:

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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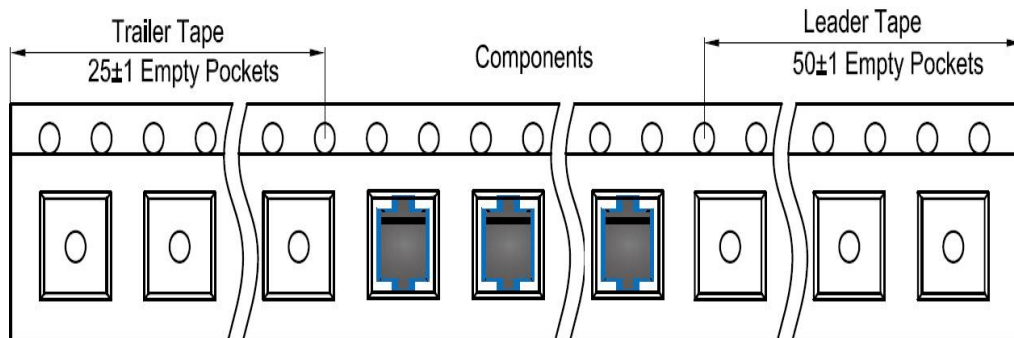
SMC Tape and Reel

SMC Embossed Carrier Tape

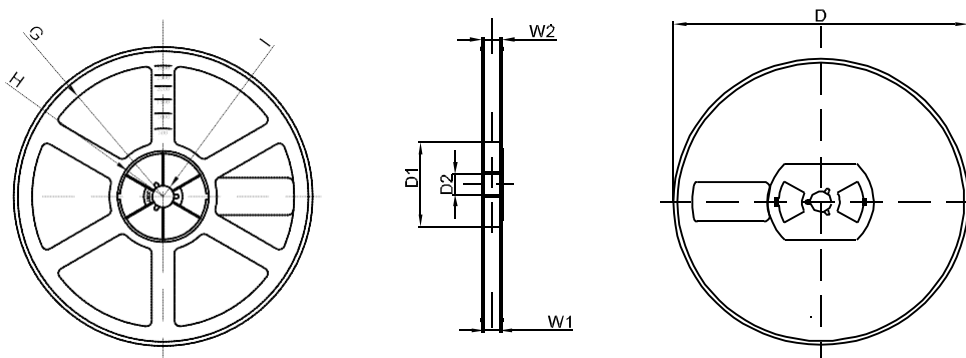


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMC	6.3	8.25	2.90	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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