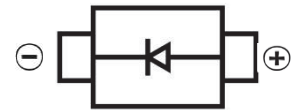


SCHOTTKY BARRIER RECTIFIER
FEATURES

- 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°C unless otherwise noted)

Parameter	Symbol	MBRS320T3	MBRS330T3	MBRS340T3	MBRS360T3	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	60	V
DC Blocking Reverse Voltage	V _R	20	30	40	60	V
Maximum Working Peak Reverse Voltage	V _{RWM}	20	30	40	60	V
Maximum Average Forward Rectified Current	I _F	3.0@T _L =100°C 4.0@T _L =90°C				A
Non-Repetitive Peak Forward Surge Current @ t@=8.3ms	I _{FSM}	80				A
Thermal Resistance From Junction To Ambient	R _{θJA}	111				°C/W
Thermal Resistance Junction to Lead	R _{θJL}	11				°C/W
Junction Temperature	T _J	-65 ~+150				°C
Storage Temperature	T _{STG}	-65 ~+150				°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	MBRS320T3	MBRS330T3	MBRS340T3	MBRS360T3	Unit	Conditions
Forward voltage	V _F *	0.50	0.50	0.525	0.740	V	I _F =3A
Reverse current	I _R *	2.0	2.0	2.0	0.5	mA	V=V _R , T _J = 25 °C
Reverse current	I _{R(H)} *	20				mA	V=V _R , T _J = 100°C

* Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

SCHOTTKY BARRIER RECTIFIER

Typical Characteristics

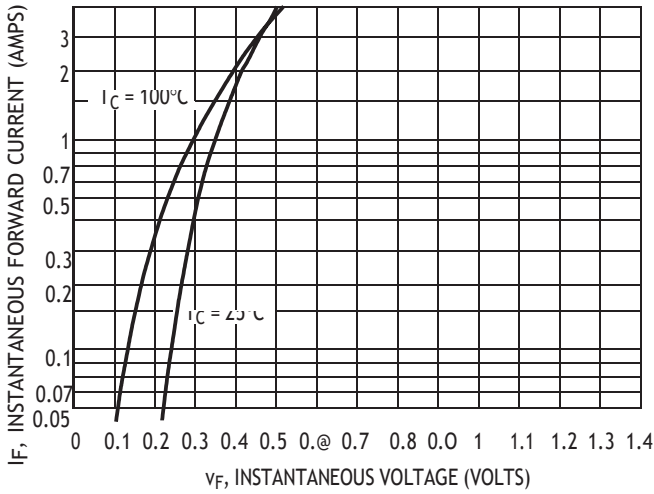


Figure 1. Typical Forward Voltage

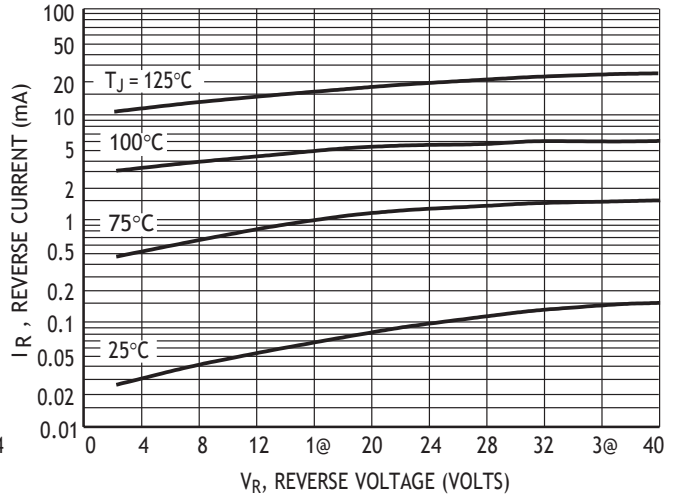


Figure 2. Typical Reverse Current

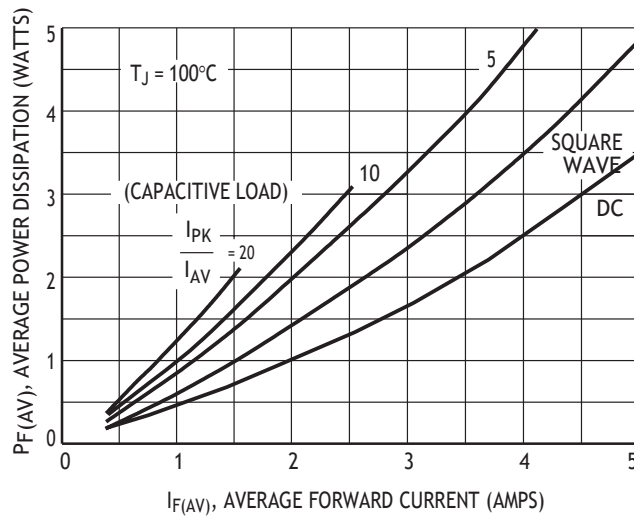


Figure 3. Power Dissipation

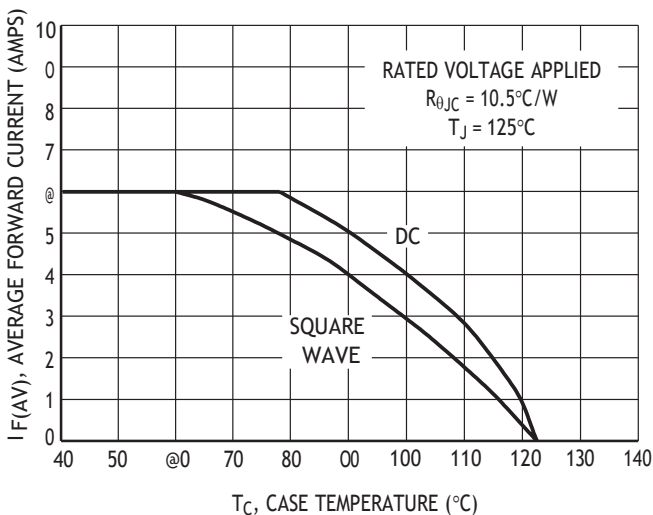


Figure 4. Current Derating (Case)

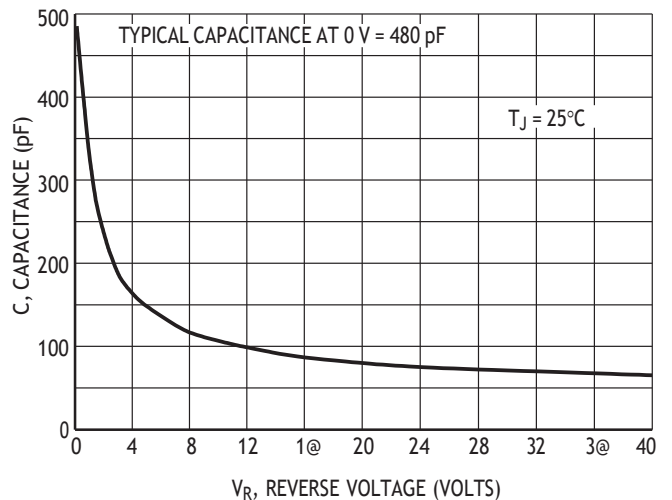
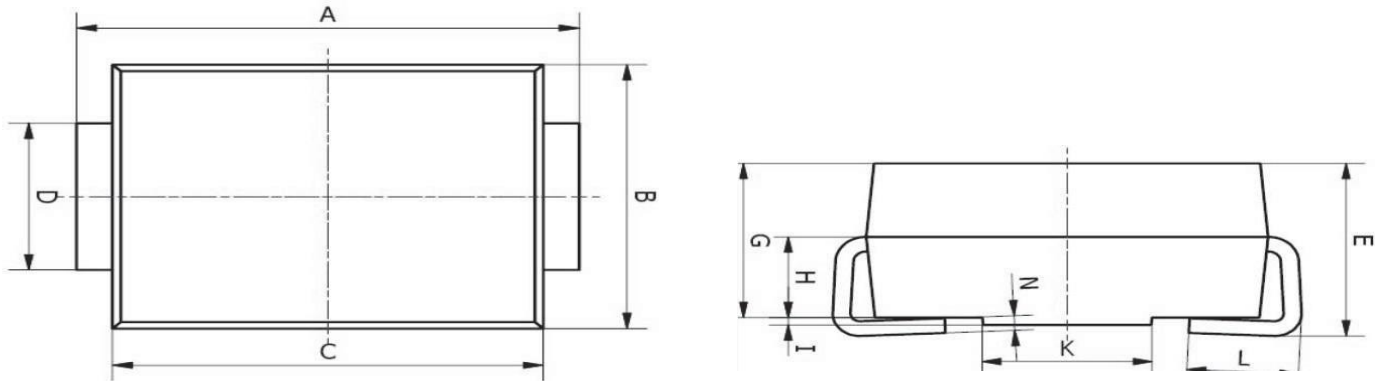
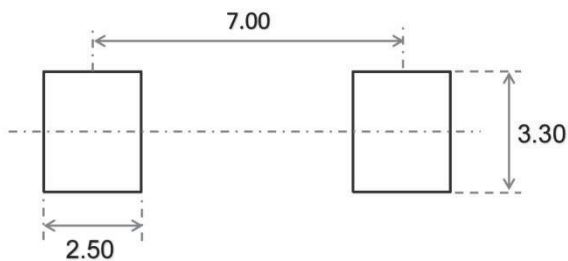


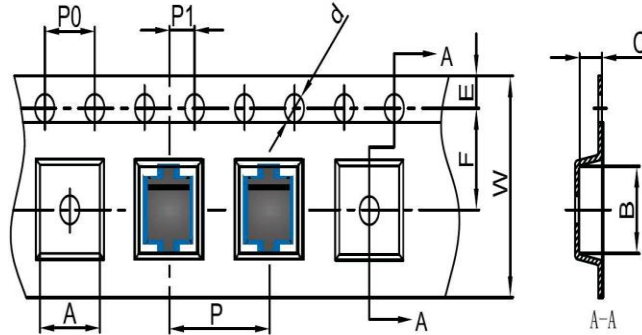
Figure 5. Typical Capacitance

SCHOTTKY BARRIER RECTIFIER
SMC Package Outline Dimensions


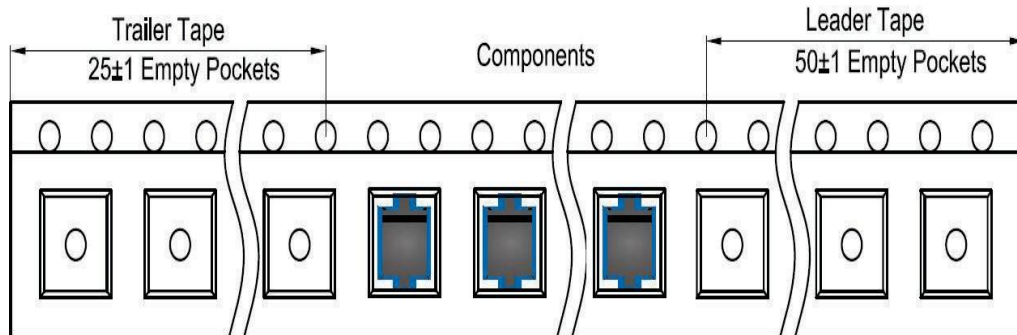
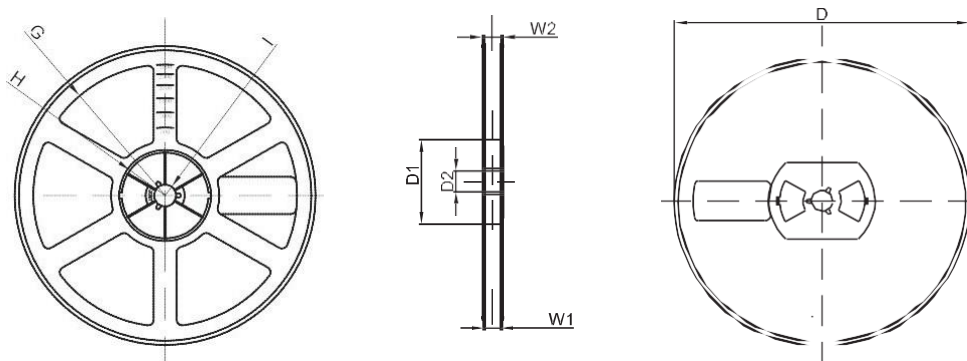
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	7.75	8.13	0.305	0.320
B	5.59	6.22	0.220	0.245
C	6.60	7.11	0.260	0.280
D	2.75	3.25	0.108	0.128
E	2.25	2.82	0.089	0.111
G	2.00	2.62	0.079	0.103
H	1.26	1.56	0.050	0.061
I	0.05	0.15	0.002	0.006
K	4.30	6.00	0.169	0.236
L	1.25	1.75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

SMC Suggested Pad Layout

Note:

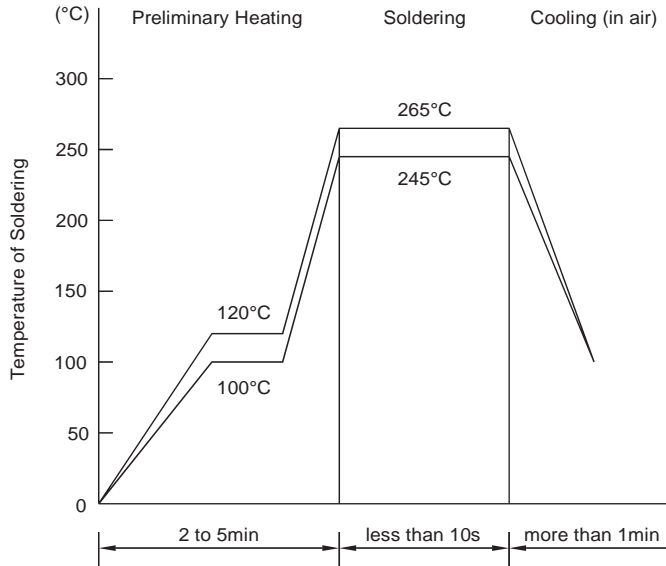
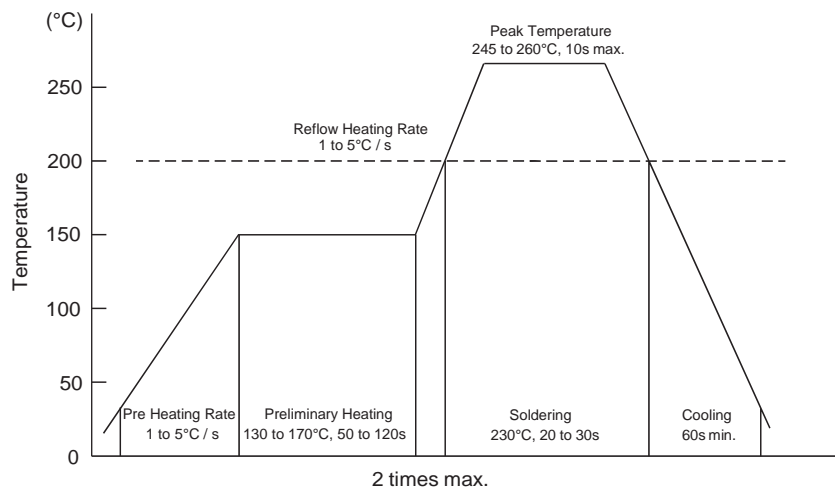
1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER RECTIFIER
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

SCHOTTKY BARRIER RECTIFIER
• Recommended condition of flow soldering

• Recommended condition of reflow soldering


Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

• Condition of hand soldering

Temperature: 370 °C

Time: 3s max.

Times: one time

• Remark: Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)