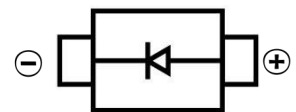


**GENERAL PURPOSE RECTIFIER DIODE**
**FEATURES**

- 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<sub>A</sub> = 25°C unless otherwise noted)**

Parameter	Symbol	MBRS320	MBRS330	MBRS340	MBRS360	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	60	V
DC Blocking Reverse Voltage	V <sub>R</sub>	20	30	40	60	V
Maximum Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	60	V
Maximum Average Forward Rectified Current	I <sub>F</sub>	3.0@T <sub>L</sub> =100°C 4.0@T <sub>L</sub> =90°C				A
Non-Repetitive Peak Forward Surge Current @t@=8.3ms	I <sub>FSM</sub>	80				A
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	111				°C/W
Thermal Resistance Junction to Lead	R <sub>θJL</sub>	11				°C/W
Junction Temperature	T <sub>J</sub>	-65 ~+150				°C
Storage Temperature	T <sub>STG</sub>	-65 ~+150				°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

Parameter	Symbol	MBRS320	MBRS330	MBRS340	MBRS360	Unit	Conditions
Forward voltage	V <sub>F</sub> *	0.50	0.50	0.525	0.740	V	I <sub>F</sub> =3A
Reverse current	I <sub>R</sub> *	2.0	2.0	2.0	0.5	mA	V=V <sub>R</sub> , T <sub>J</sub> = 25 °C
Reverse current	I <sub>R(H)</sub> *	20				mA	V=V <sub>R</sub> , T <sub>J</sub> = 100°C

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

GENERAL PURPOSE RECTIFIER DIODE

Typical Characteristics

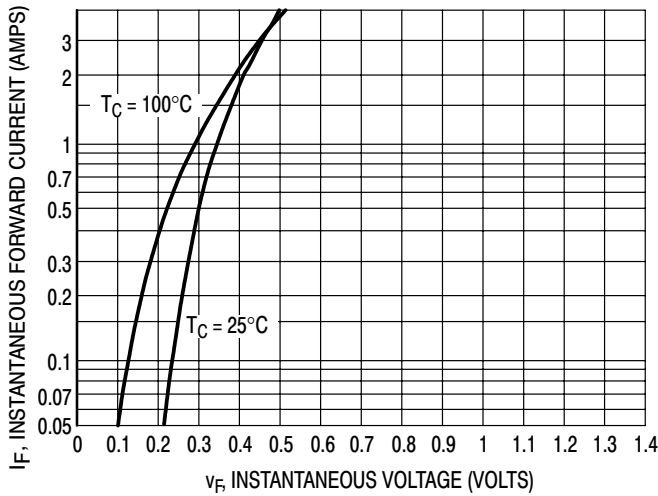


Figure 1. Typical Forward Voltage

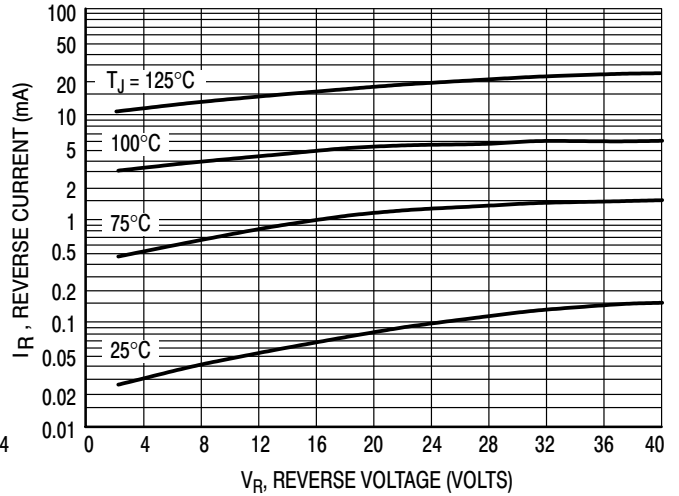


Figure 2. Typical Reverse Current

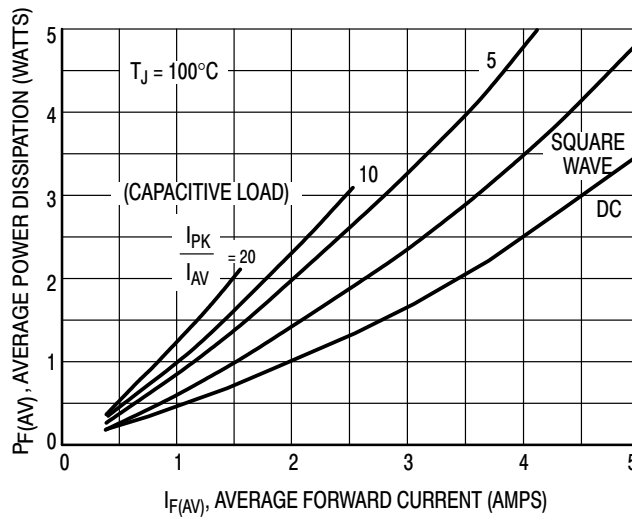


Figure 3. Power Dissipation

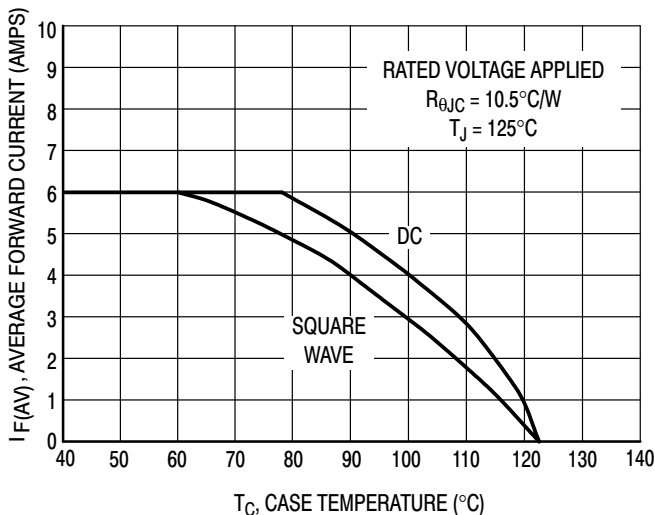


Figure 4. Current Derating (Case)

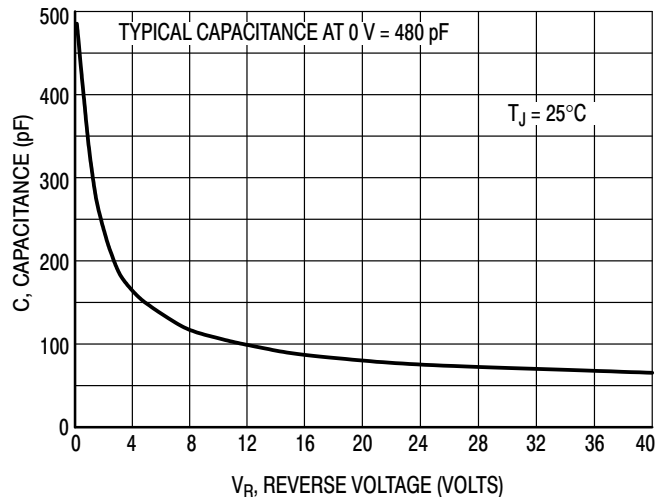
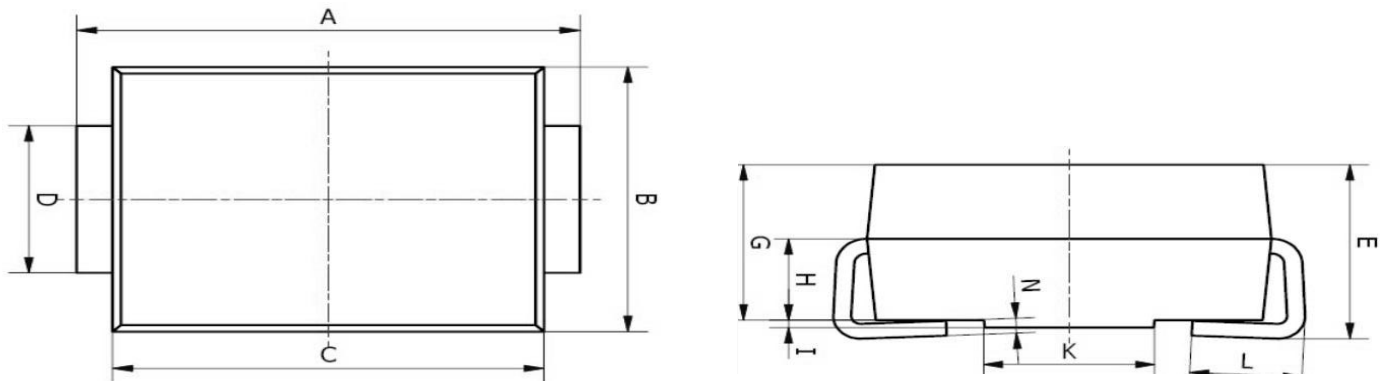
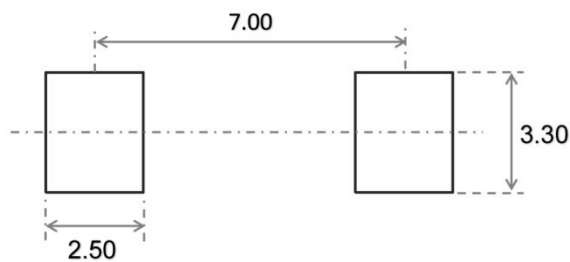


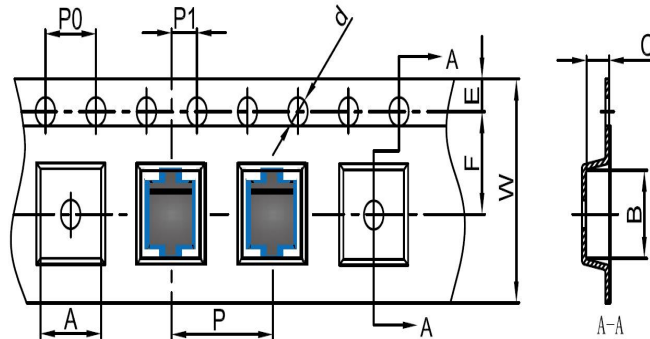
Figure 5. Typical Capacitance

**GENERAL PURPOSE RECTIFIER DIODE**
**SMC Package Outline Dimensions**


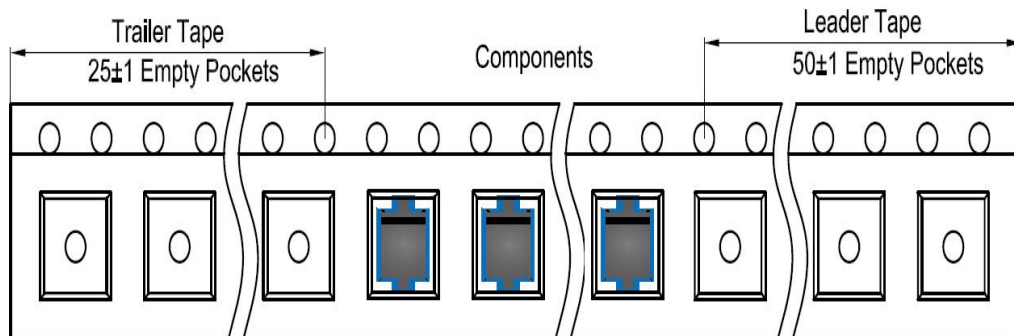
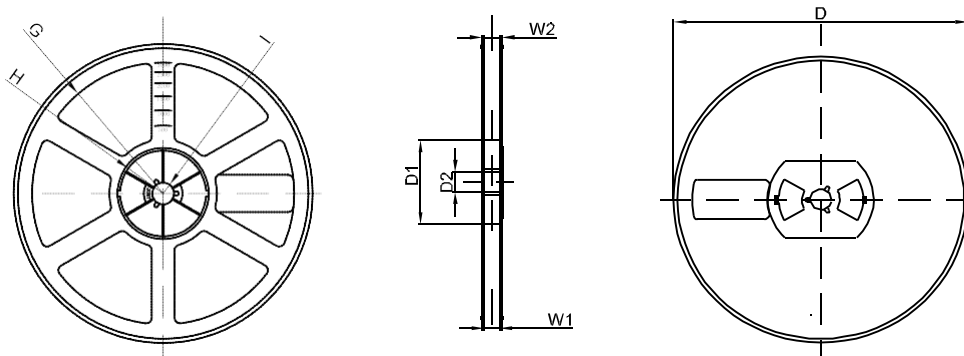
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	7.75	8.13	0.305	0.320
B	5.59	6.22	0.220	0.245
C	6.60	7.11	0.260	0.280
D	2.75	3.25	0.108	0.128
E	2.25	2.82	0.089	0.111
G	2.00	2.62	0.079	0.103
H	1.26	1.56	0.050	0.061
I	0.05	0.15	0.002	0.006
K	4.30	6.00	0.169	0.236
L	1.25	1.75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

**GENERAL PURPOSE RECTIFIER DIODE**
**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