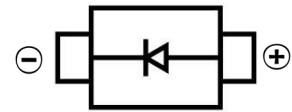


SUPER FAST RECOVERY RECTIFIER DIODE**FEATURES**

- Glass passivated junction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Super fast recovery time
- Surface Mount device

**SMB****MECHANICAL DATA**

- Case: SMB(DO-214AA)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.088 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}	200	V
DC Blocking Reverse Voltage	V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	V
Maximum Average Forward Rectified Current	I_F	2	A
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	50	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	25	$^{\circ}\text{C/W}$
Reverse Recovery Time(@ $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$)	t_{rr}	35	nS
Junction Temperature	T_J	-55 ~+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~+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			0.95	V	$I_F=2\text{A}$
Reverse current @ $T_A=25^{\circ}\text{C}$	I_R			5	μA	$V_R=200\text{V}$
Reverse current @ $T_A=125^{\circ}\text{C}$	I_R			350	μA	$V_R=200\text{V}$
Diode capacitance	C_D		25		pF	$V_R=4\text{V}, f=1\text{MHz}$

SUPER FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

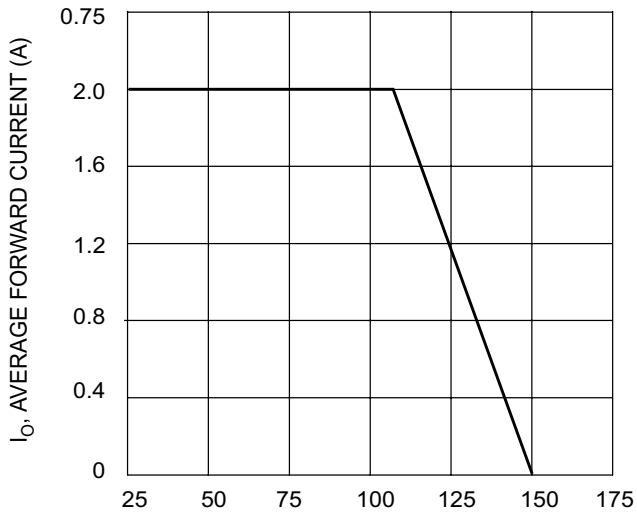


Fig. 1 Forward Current Derating Curve

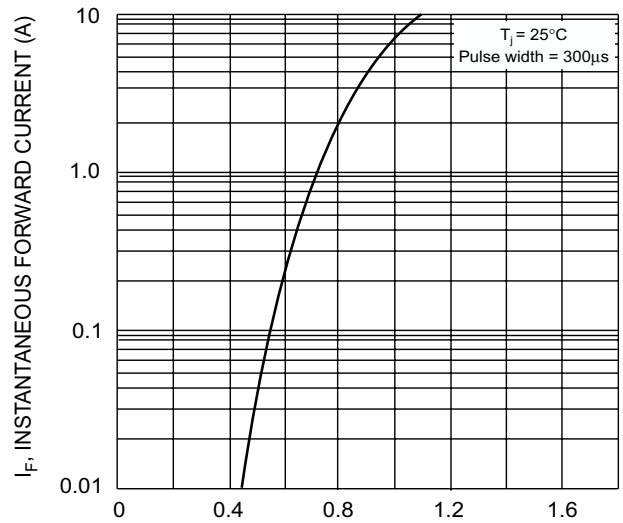


Fig. 2 Typical Forward Characteristics

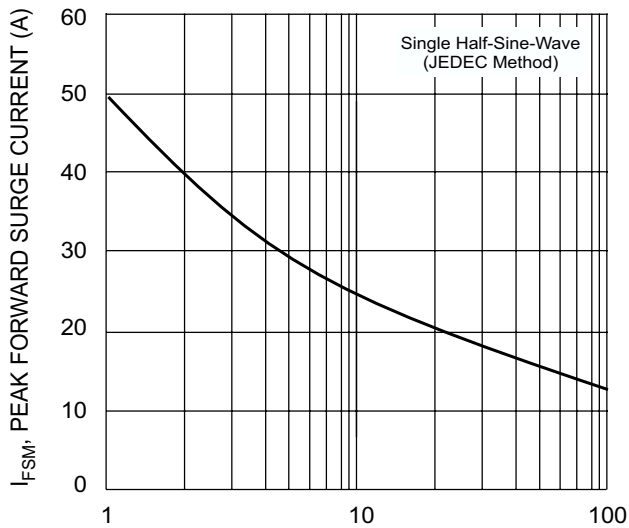


Fig. 3 Surge Current Derating Curve

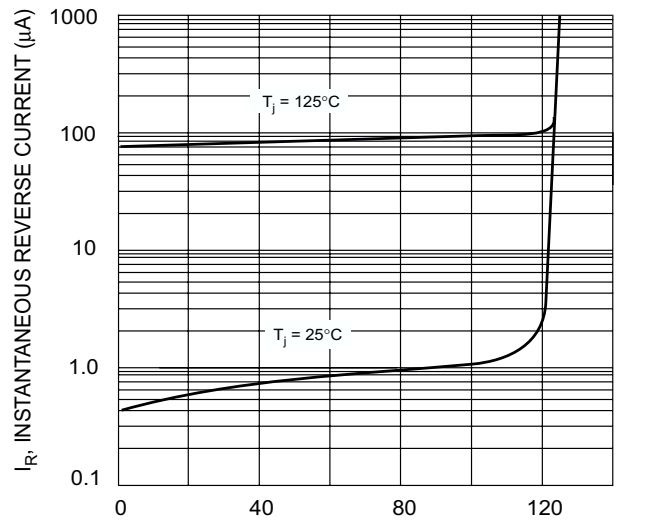
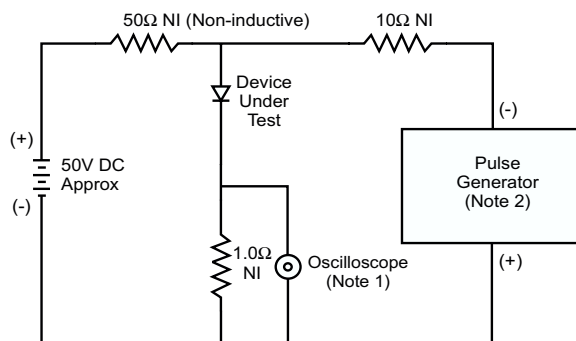


Fig. 4 Typical Reverse Characteristics



Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

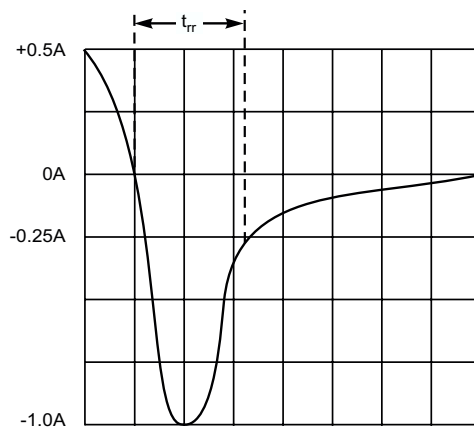
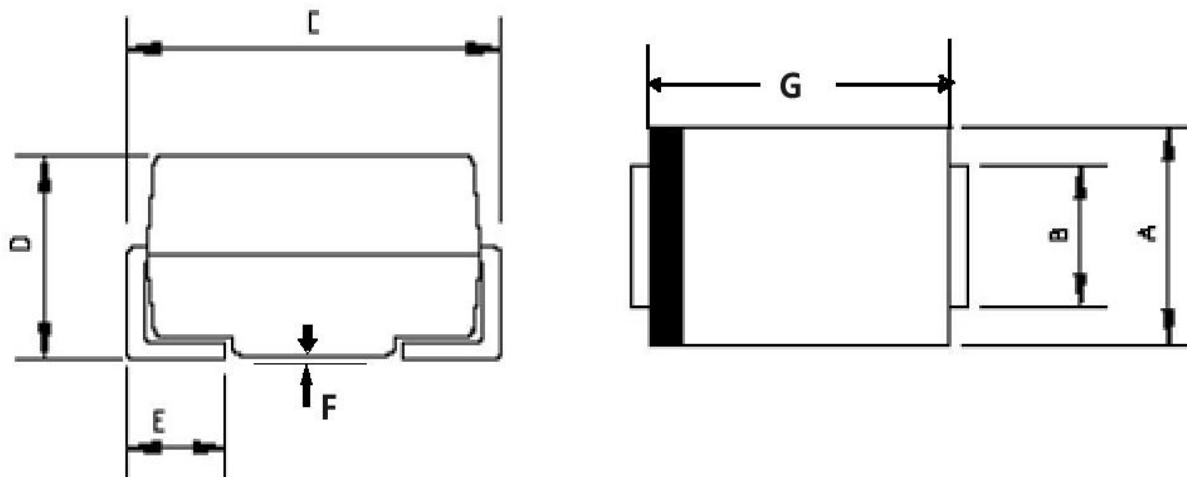
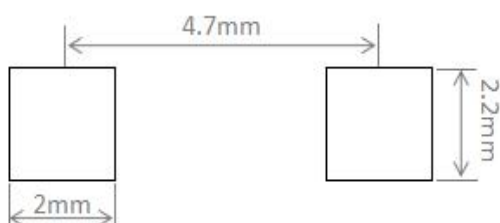


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

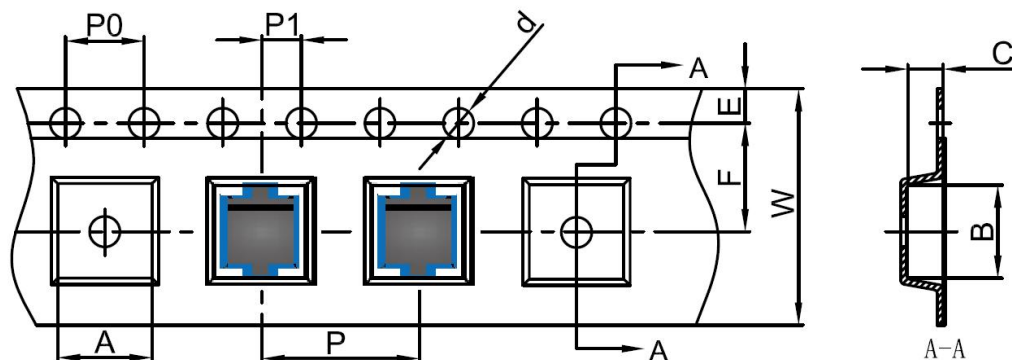
SUPER FAST RECOVERY RECTIFIER DIODE
SMB Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.400	3.800	1.339	1.496
B	1.800	2.200	0.709	0.866
C	5.100	5.500	2.008	2.165
D	2.200	2.500	0.866	0.984
E	0.900	1.500	0.354	0.591
F	0.050	0.200	0.020	0.079
G	4.300	4.700	1.693	1.850

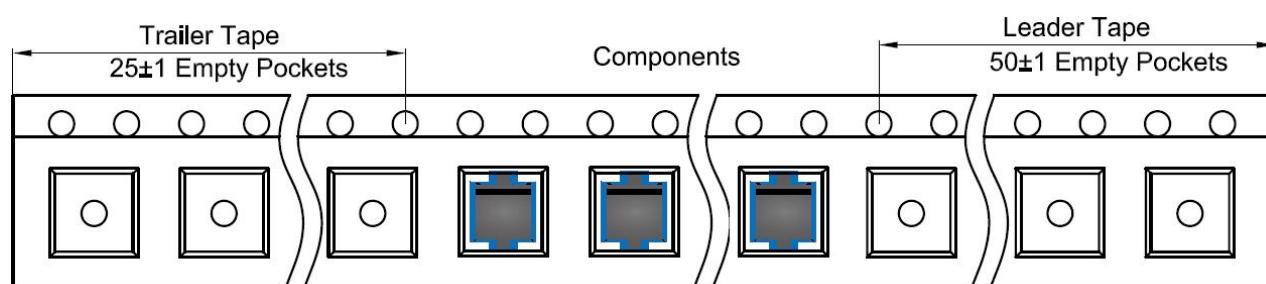
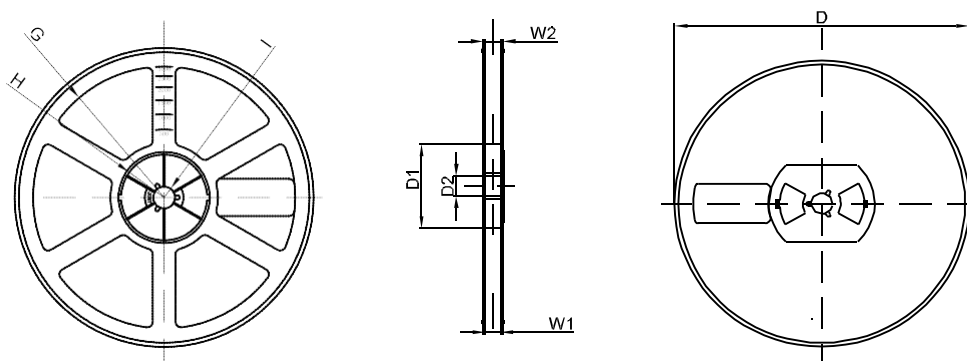
SMB Suggested Pad Layout


Note:

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

SUPER FAST RECOVERY RECTIFIER DIODE
SMB Tape and Reel
SMB Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMB	4.10	5.50	2.58	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMB Tape Leader and Trailer

SMB Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330	75.0	13.00	R165	R37.50	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1