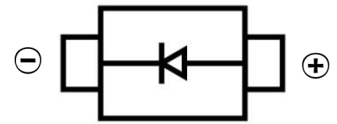


FAST RECOVERY RECTIFIER DIODE**FEATURES**

- Low Reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop
- Surface Mount device

**SMAF****MECHANICAL DATA**

- Case: SMAF
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.027 grams (approximate)

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

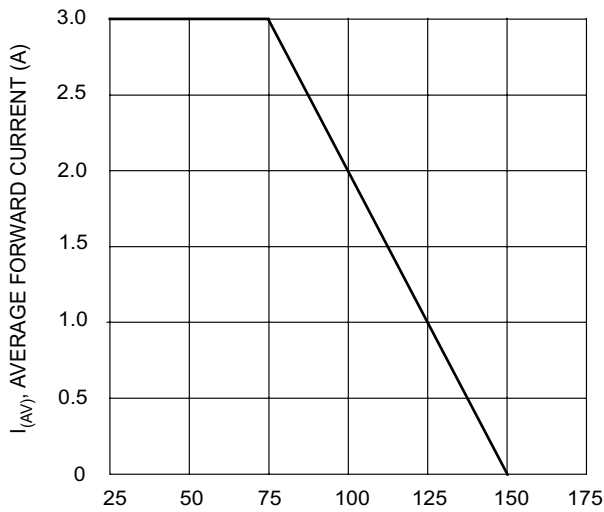
Parameter	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	V
DC Blocking Reverse Voltage	V_R	50	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	V
Maximum Average Forward Rectified Current	I_F	3	A
Non-Repetitive Peak Forward Surge Current @ $t_F=8.3\text{ms}$	I_{FSM}	100	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	20	$^\circ\text{C/W}$
Reverse Recovery Time(@ $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$)	t_{rr}	150	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)

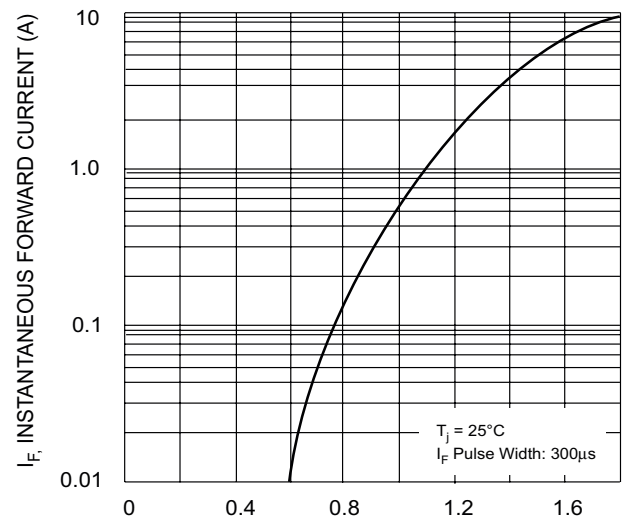
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F			1.3	V	$I_F=3\text{A}$
Reverse current	I_R			5	μA	$V_R=50\text{V}$
Diode capacitance	C_D		60		pF	$V_R=4\text{V}_{DC}$, $f=1\text{MHz}$

FAST RECOVERY RECTIFIER DIODE

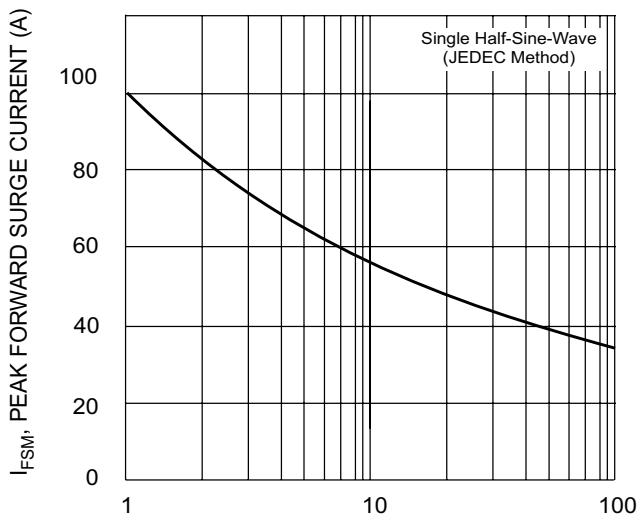
Typical Characteristics



T_T , TERMINAL TEMPERATURE ($^{\circ}C$)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Forward Surge Current Derating Curve

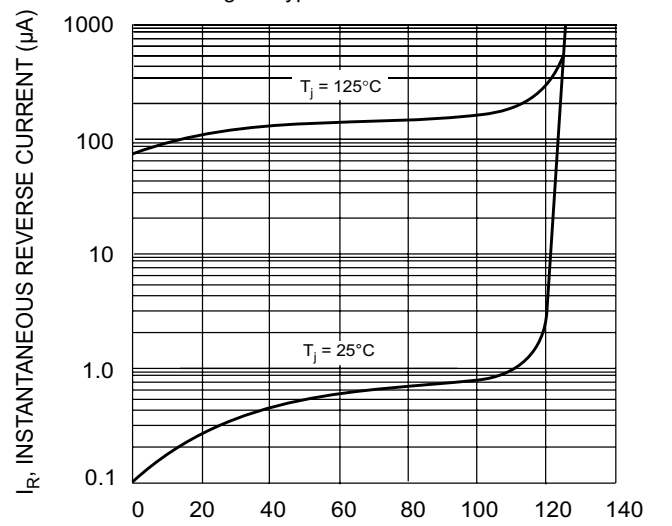
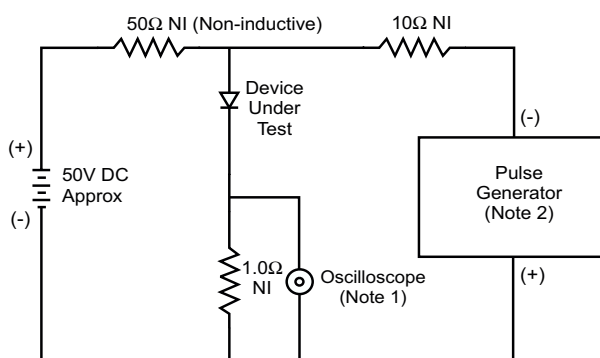


Fig. 4 Typical Reverse Characteristics



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

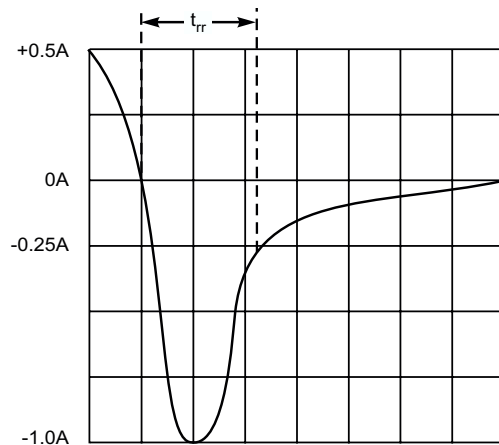
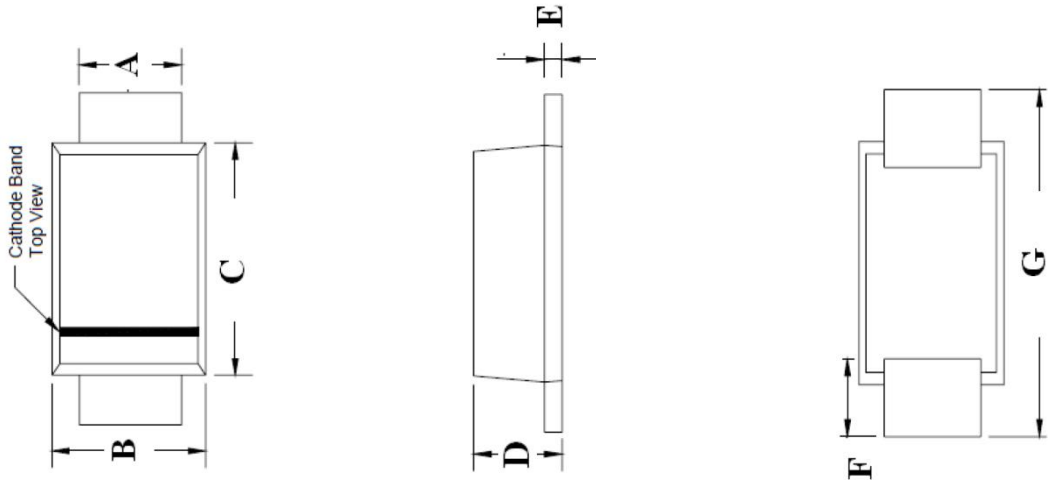


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

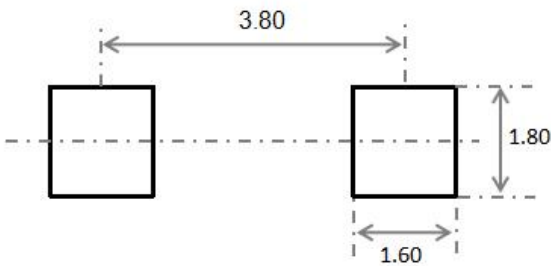
FAST RECOVERY RECTIFIER DIODE

SMAF Package Outline Dimensions



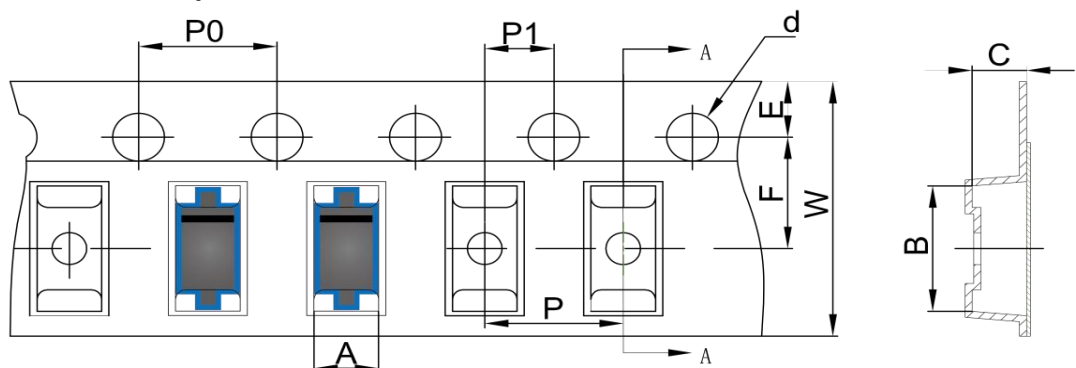
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.30	1.60	0.051	0.063
B	2.40	2.80	0.094	0.110
C	3.25	3.65	0.128	0.144
D	1.10	1.40	0.043	0.055
E	0.15	0.25	0.006	0.010
F	0.70	1.20	0.028	0.047
G	4.40	4.90	0.173	0.193

SMAF Suggested Pad Layout

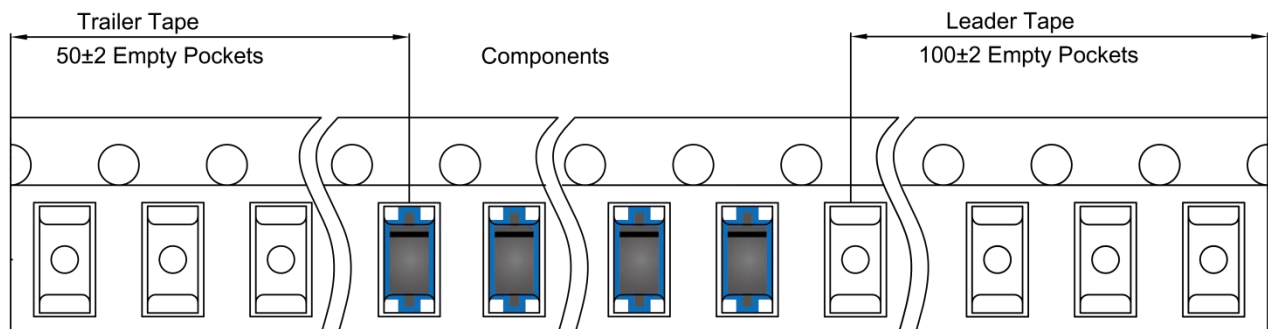
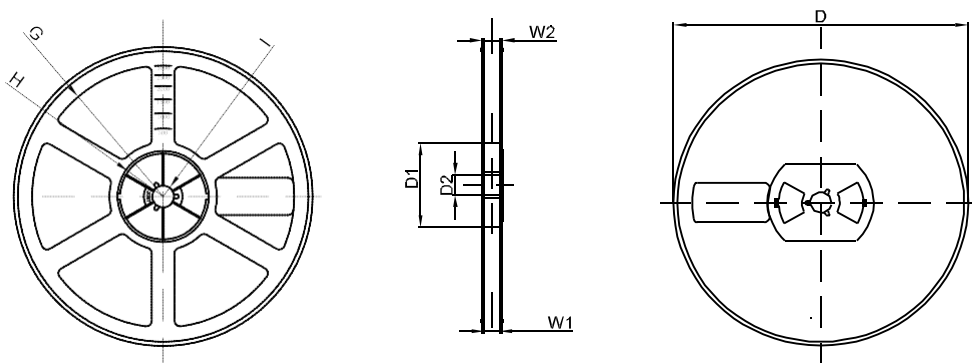


Note:

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

FAST RECOVERY RECTIFIER DIODE**SMAF Tape and Reel****SMAF Embossed Carrier Tape**

DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMAF	2.79	5.35	1.48	Ø1.50	1.75	5.50	4.00	4.00	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

SMAF Tape Leader and Trailer**SMAF Reel**

DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1