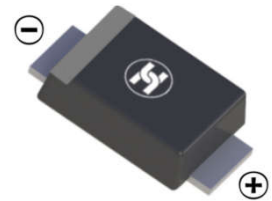


SUPER FAST RECOVERY RECTIFIER DIODE

FEATURES

- Low reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop
- Super fast recovery time for high efficiency
- Surface mount device



SMAF



MECHANICAL DATA

- Case: SMAF
- Case material: Molded plastic. UL flammability
- Classification rating: 94V-0
- Terminals: Solder plated, solderable per MIL-STD-202,method 208
- Weight: 0.027 grams (approximate)

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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	1000	V
RMS reverse voltage	V_{RMS}	700	
DC blocking voltage	V_{DC}	1000	
Maximum average forward output current	$I_{F(AV)}$	1.0	A
Peak forward surge current, @8.3ms single half-sine-wave, $T_J = 25^\circ\text{C}$	I_{FSM}	30	
Typical thermal resistance (Note 1)	$R_{\theta JA}$	78	$^\circ\text{C/W}$
	$R_{\theta JC}$	18	
	$R_{\theta JL}$	20	
Operating junction and storage temperature range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Note:

1. Device mounted on PCB with 10mmx20mmx0.1mm copper pad areas

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Max	Unit	Conditions
Instantaneous forward voltage	V_F	2.5	V	$I_F = 1\text{A}$
Reverse current	I_R	10	μA	$V_R = 1000\text{V}$
		200		$V_R = 1000\text{V}, T_A = 125^\circ\text{C}$
Reverse Recovery Time	t_{rr}	35	ns	$I_F = 0.5\text{A}, I_{RM} = 1\text{A}, I_{R(REC)} = 0.25\text{A}$

SUPER FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

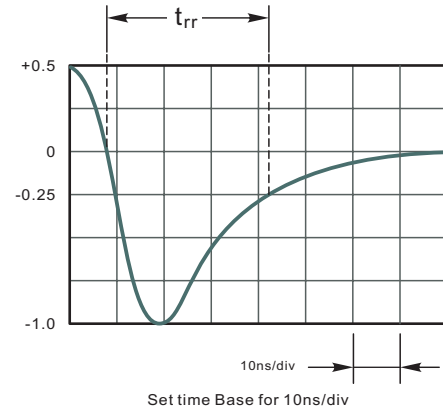
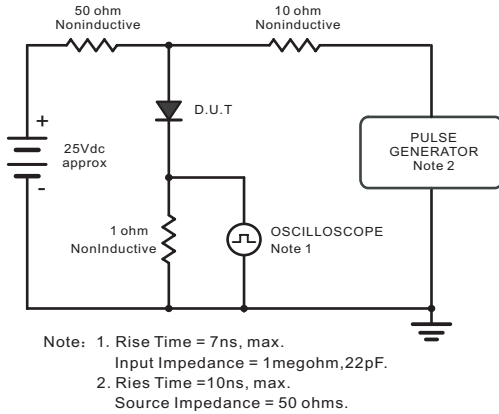


Fig.2 Maximum Average Forward Current Rating

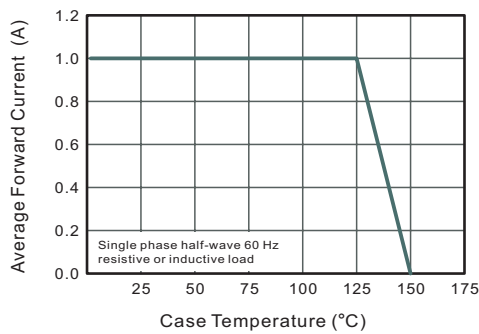


Fig.3 Typical Reverse Characteristics

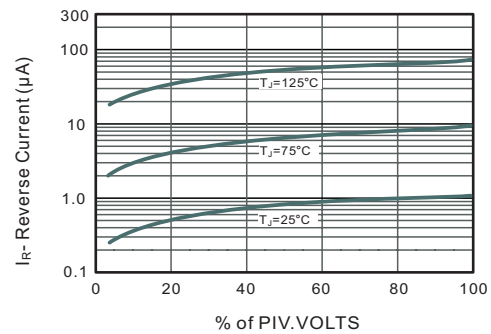


Fig.4 Typical Forward Characteristics

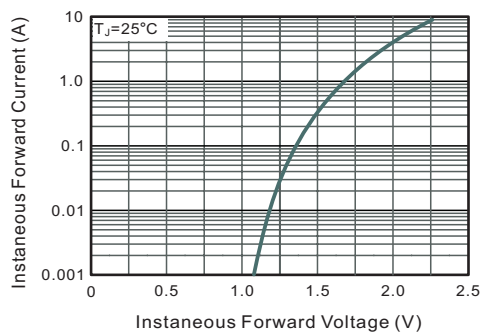


Fig.5 Typical Junction Capacitance

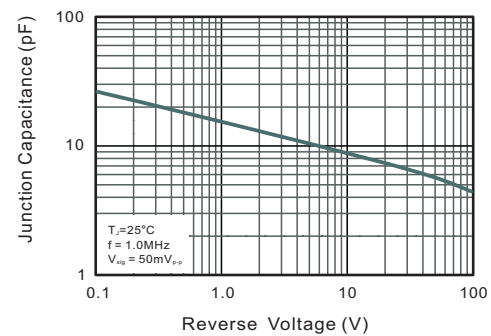
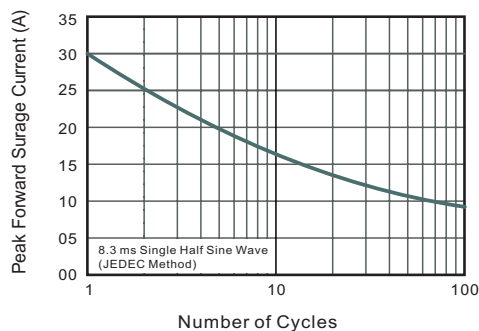
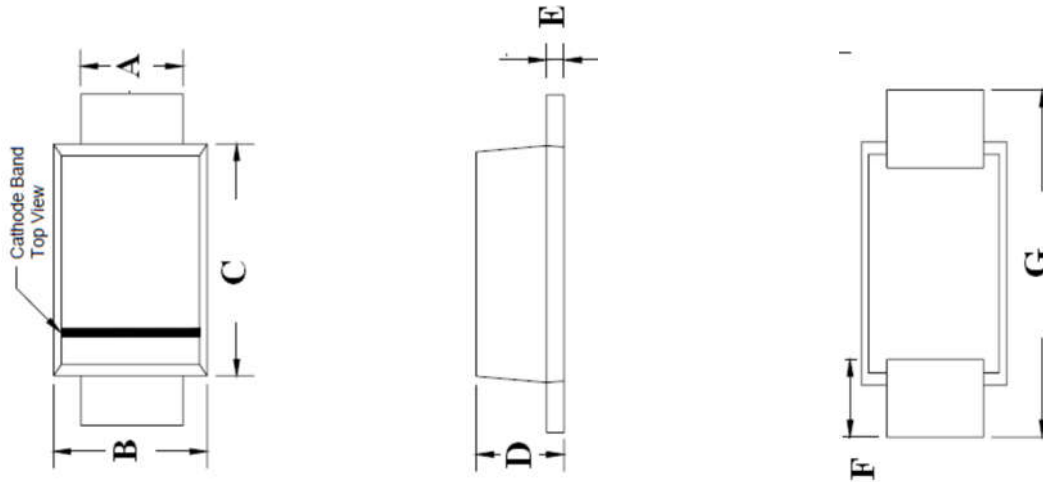


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



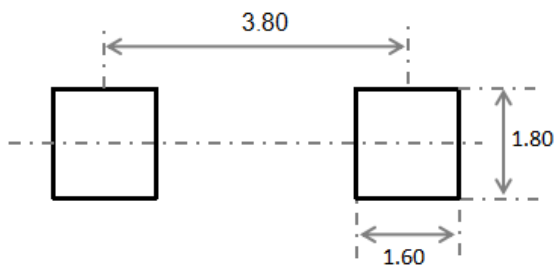
SUPER FAST RECOVERY RECTIFIER DIODE

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



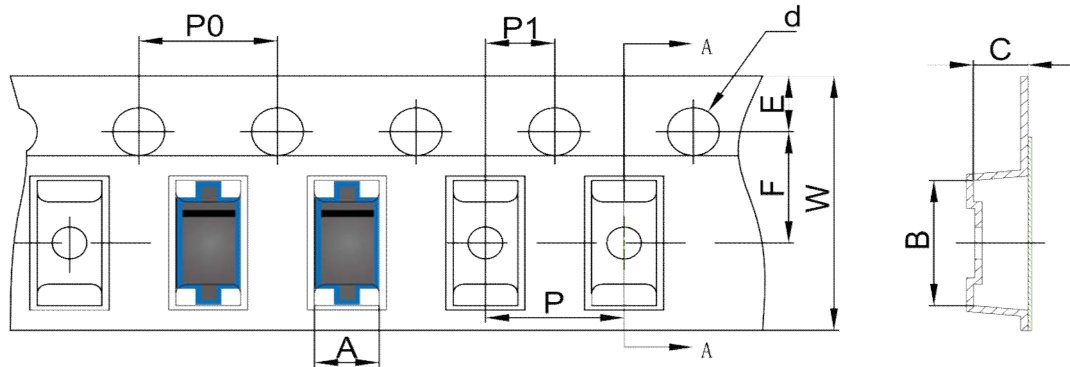
Note:

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

SUPER FAST RECOVERY RECTIFIER DIODE

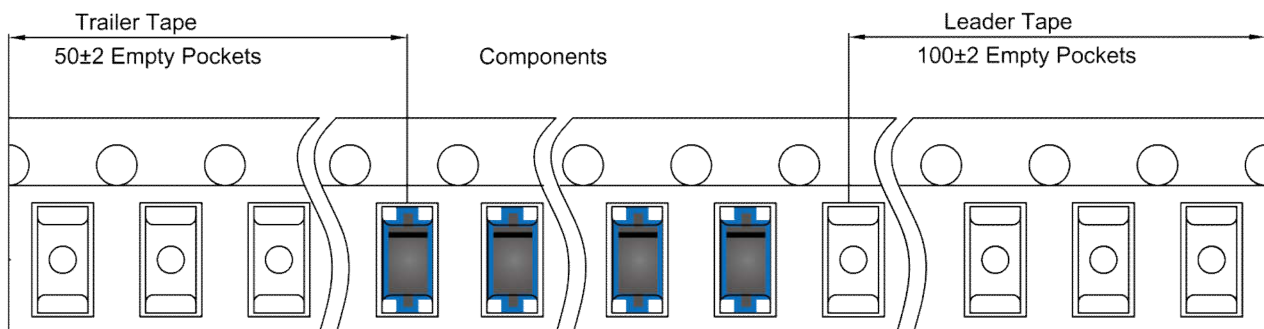
SMAF Tape and Reel

SMAF Embossed Carrier Tape

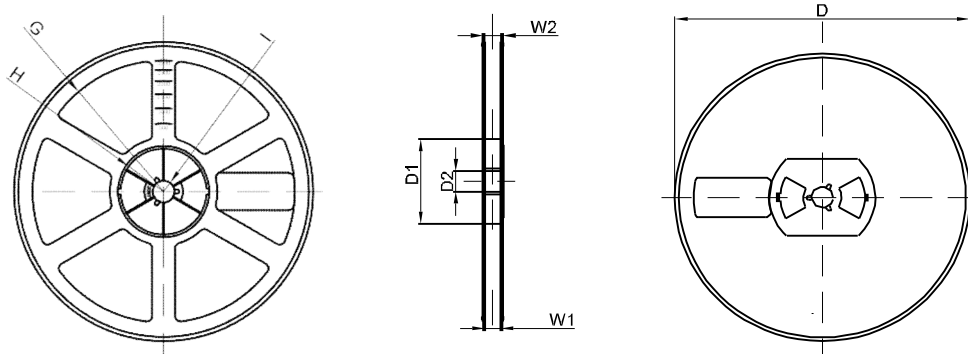


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMAF	2.79	5.35	1.48	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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