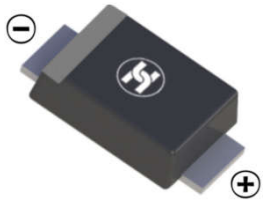
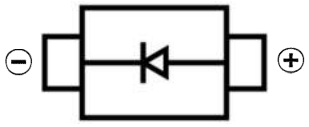
SUPER FAST RECOVERY RECTIFIER DIODE

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°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°C	I_{FSM}	30	
Typical thermal resistance (Note 1)	$R_{\theta JA}$	78	°C/W
	$R_{\theta JC}$	18	
	$R_{\theta JL}$	20	
Operating junction and storage temperature range	T_J,T_{STG}	-55~+150	°C

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

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

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

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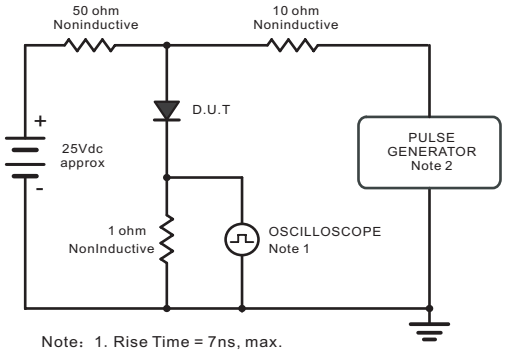
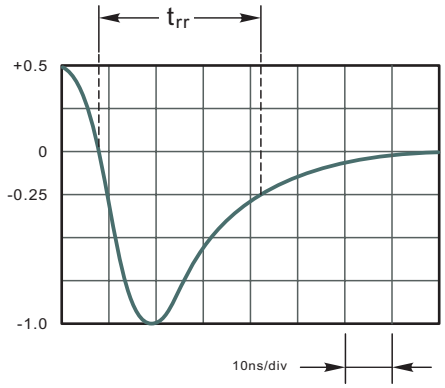
Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note：1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

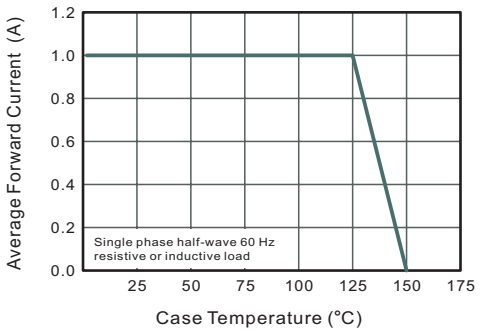


Fig.3 Typical Reverse Characteristics

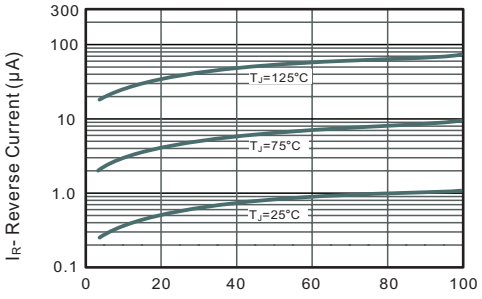


Fig.4 Typical Forward Characteristics

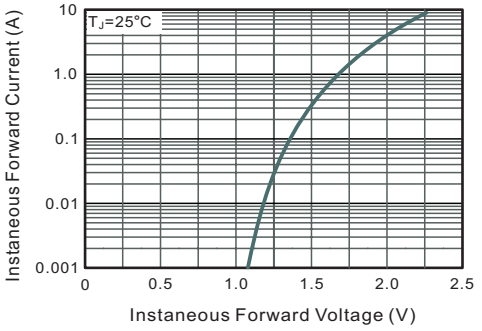


Fig.5 Typical Junction Capacitance

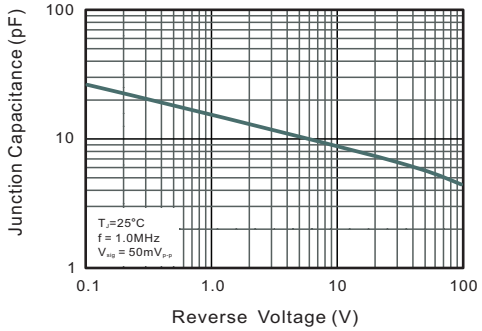
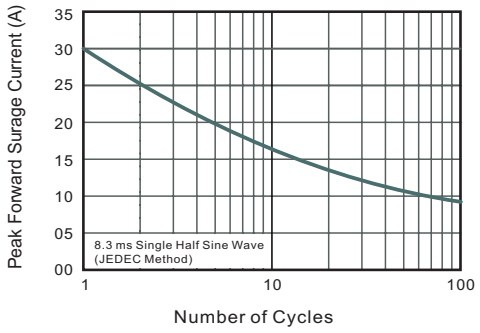
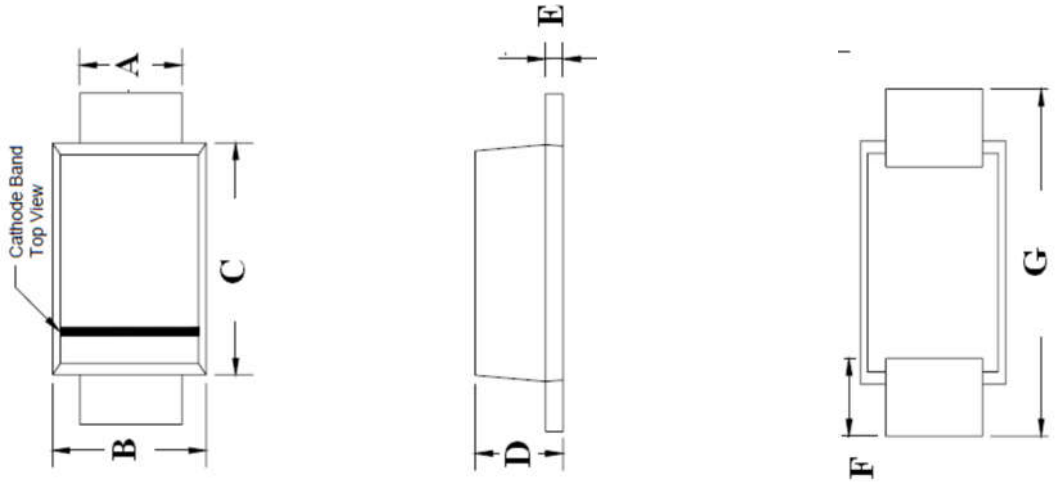


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current

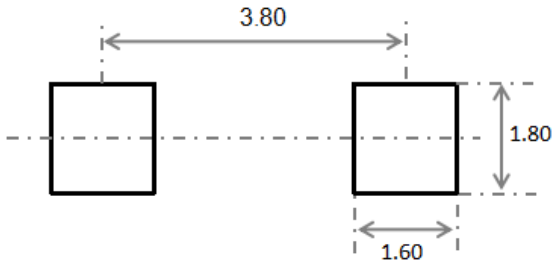


SMAF Package Outline Dimensions



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: ±0.05mm

3.The pad layout is for reference purposes only

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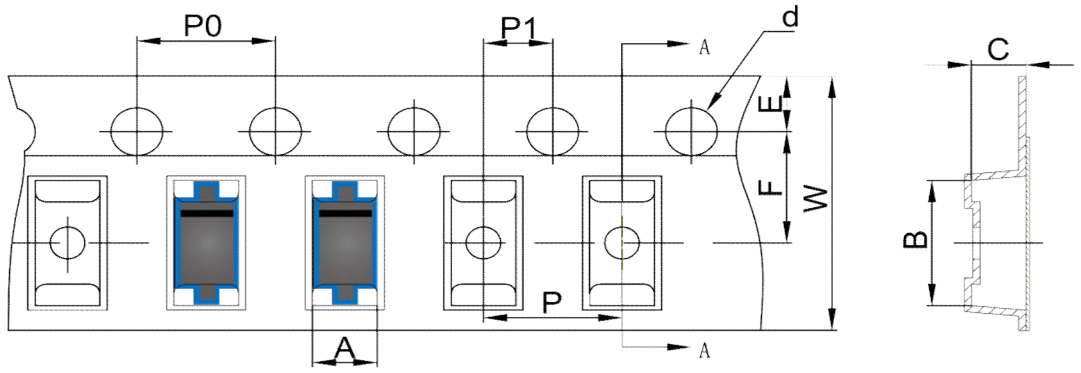
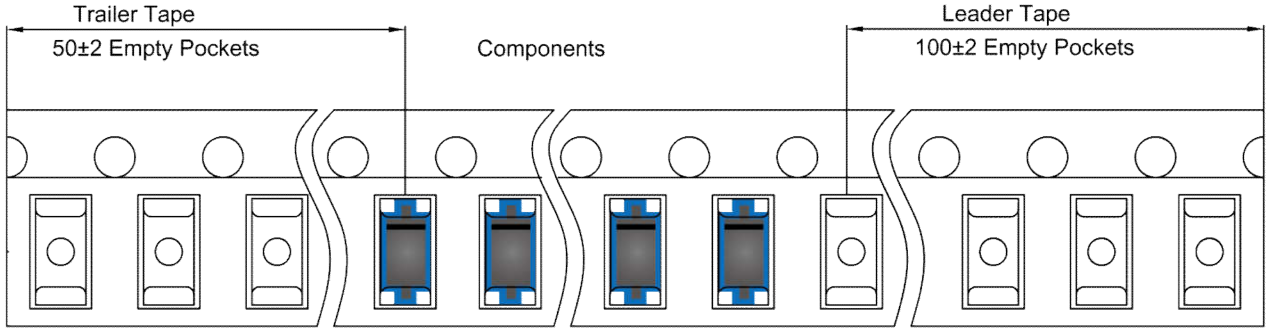
SMAF Tape and Reel

SMAF Embossed Carrier Tape

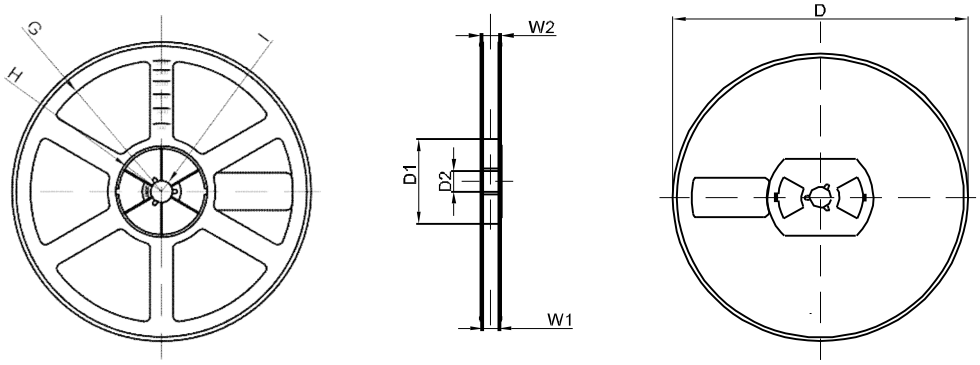


	DIMENSIONS ARE IN MILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMAF	2.79	5.35	1.48	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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