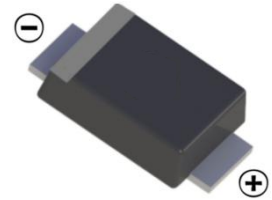


SUPER FAST RECOVERY RECTIFIER DIODE

FEATURES

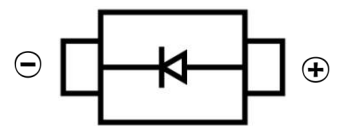
- Low Reverse voltage leakage current
- Glass passivated junction
- High forward surge current capability
- Low forward voltage drop
- Super Fast Recovery Time for High Efficiency
- Surface Mount device



SMAF

MECHANICAL DATA

- Case: SMAF
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- 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}	600	V
DC Blocking Reverse Voltage	V_R	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Maximum Average Forward Rectified Current	I_F	1	A
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	30	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	80	$^\circ\text{C/W}$
Reverse Recovery Time(@ $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$)	t_{rr}	30	nS
Junction Temperature	T_J	-55 ~+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~+150	$^\circ\text{C}$

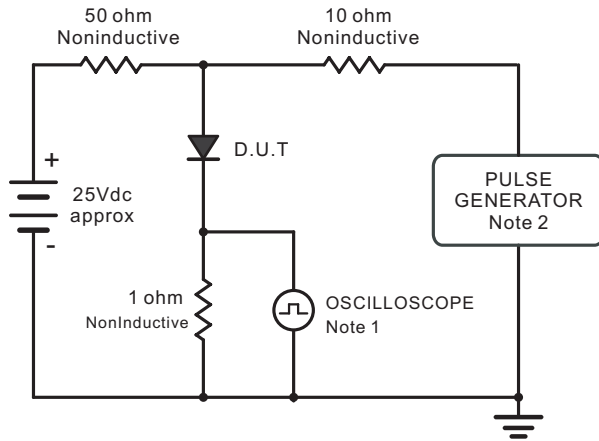
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F			1.68	V	$I_F=1\text{A}$
Reverse current @ $T_A=25^\circ\text{C}$	I_R			5	μA	$V_R=600\text{V}$
Reverse current @ $T_A=125^\circ\text{C}$	I_R			100	μA	$V_R=600\text{V}$
Diode capacitance	C_D		15		pF	$V_R=4V_{DC}$, $f=1\text{MHz}$

SUPER FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

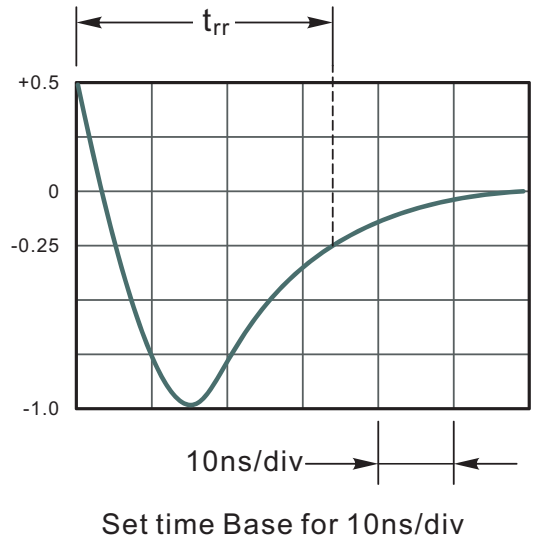


Fig.2 Maximum Average Forward Current Rating

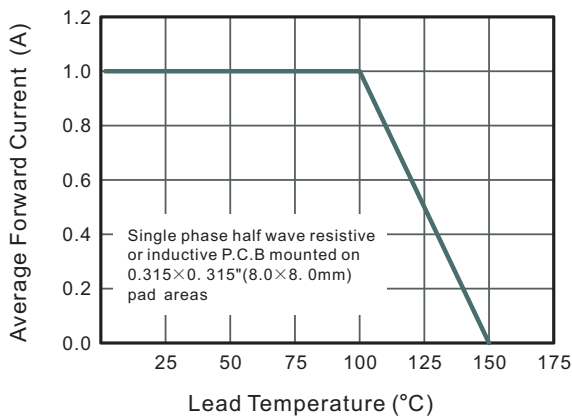


Fig.3 Typical Reverse Characteristics

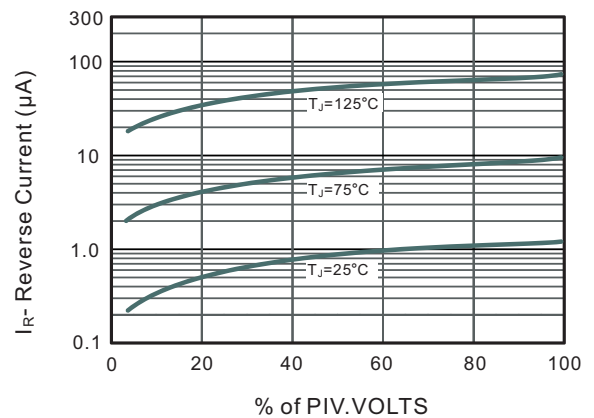


Fig.4 Typical Forward Characteristics

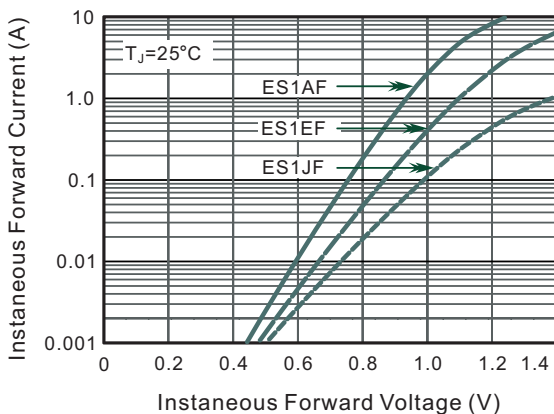
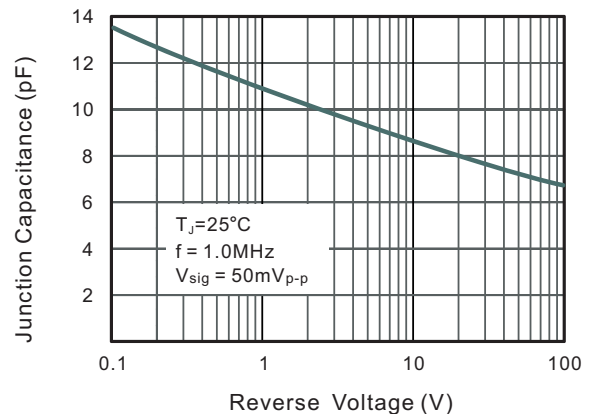
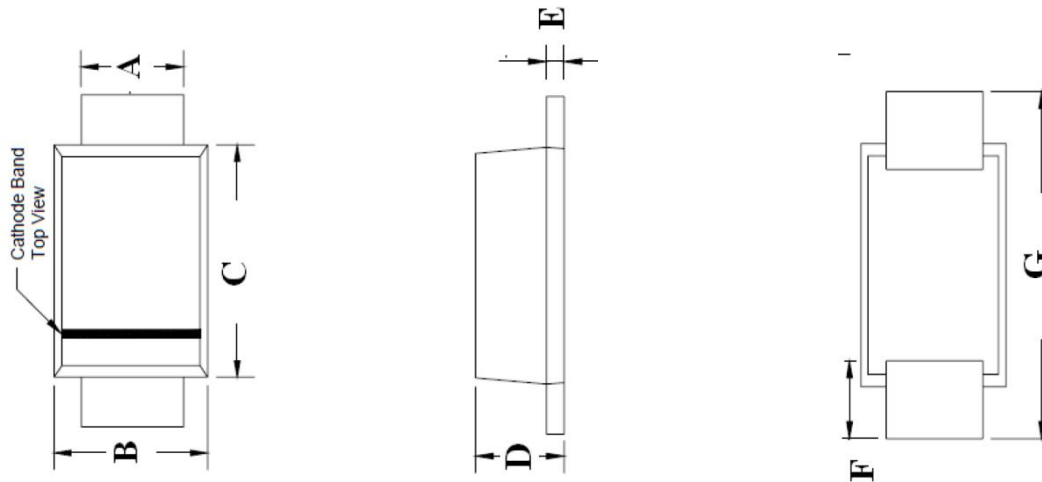


Fig.5 Typical Junction Capacitance



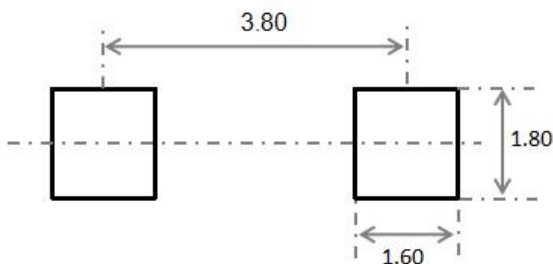
SUPER FAST RECOVERY RECTIFIER DIODE

SMAF Package Outline Dimensions



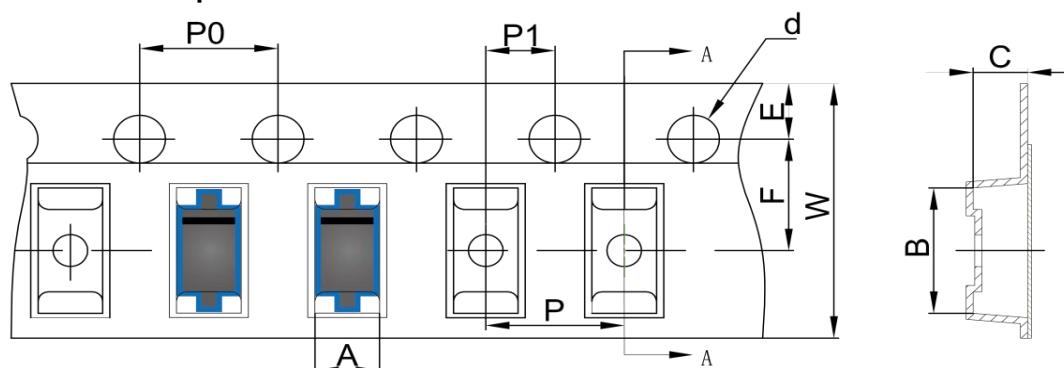
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.30	1.60	0.051	0.063
B	2.40	2.80	0.094	0.110
C	3.25	3.65	0.128	0.144
D	1.10	1.40	0.043	0.055
E	0.15	0.25	0.006	0.010
F	0.70	1.20	0.028	0.047
G	4.40	4.90	0.173	0.193

SMAF Suggested Pad Layout

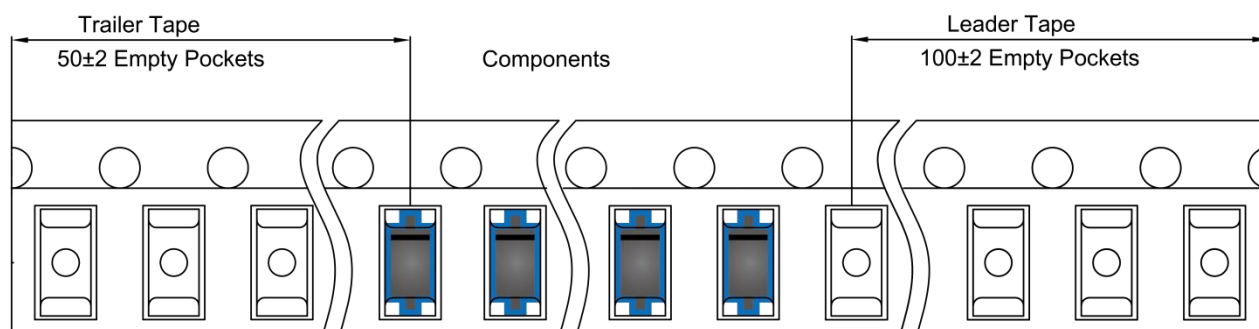
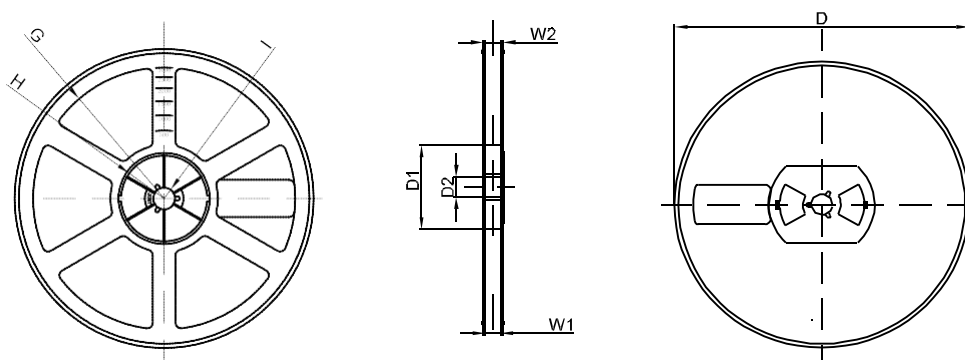


Note:

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