

## SCHOTTKY BARRIER DIODE

### FEATURES

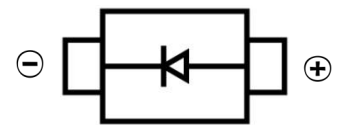
- Small Surface Mount device
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



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)

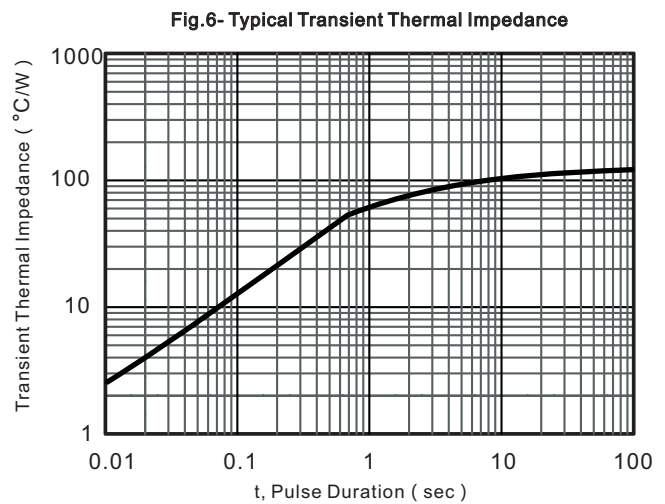
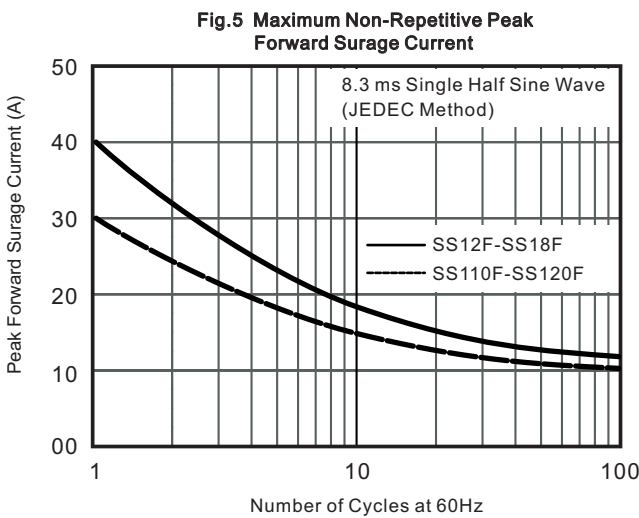
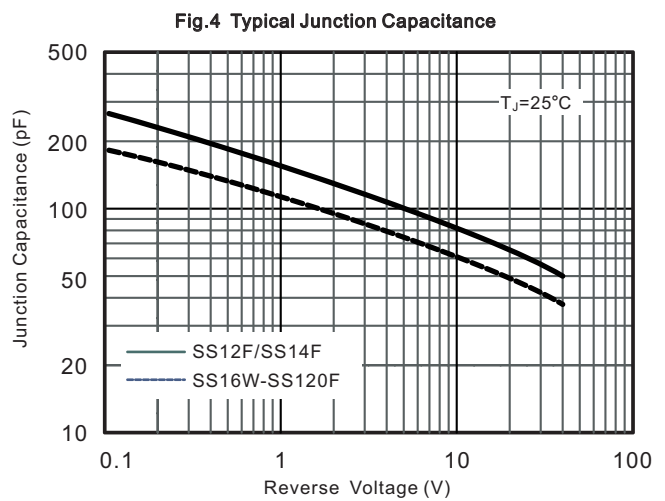
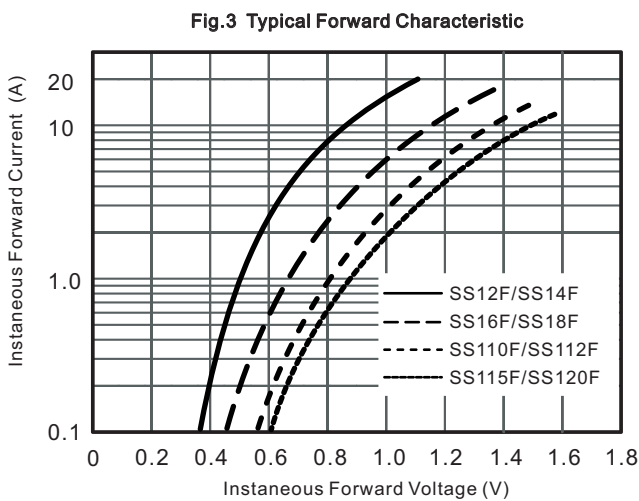
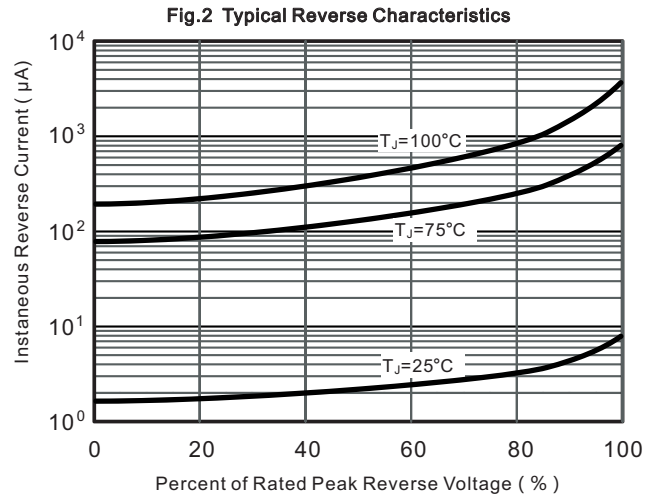
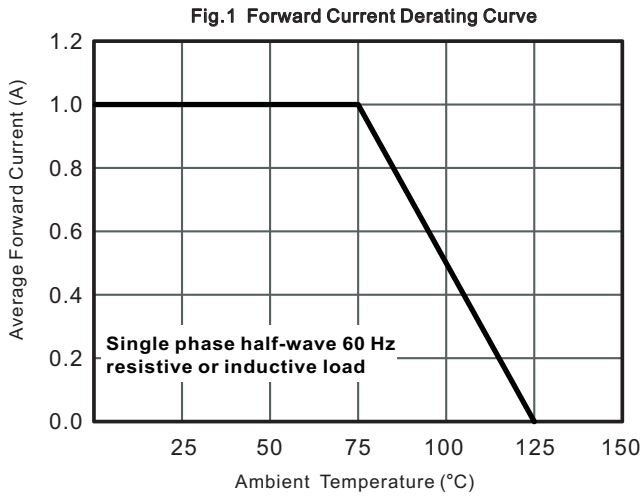
Parameter	Symbol	SS12F	SS14F	SS16F	SS18F	SS110F	SS112F	SS115F	SS120F	Unit
Repetitive peak reverse voltage	$V_{RRM}$	20	40	60	80	100	120	150	200	V
DC Reverse Voltage	$V_R$	20	40	60	80	100	120	150	200	V
RMS Reverse Voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V
Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$	$I_{FSM}$	40				30				A
Mean rectifying current	$I_F$	1.0								A
Thermal Resistance	$R_{\theta JA}$	115								$^\circ\text{C/W}$
Junction Temperature	$T_J$	125								$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150								$^\circ\text{C}$

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

Parameter	Symbol	SS12F	SS14F	SS16F	SS18F	SS110F	SS112F	SS115F	SS120F	Unit	Conditions
Forward voltage	$V_F$	0.55		0.70		0.85		0.9		V	$I_F = 1\text{A}$
Reverse current $T = 25^\circ\text{C}$	$I_R$	0.3				0.2		0.1		mA	$V = V_R$
Reverse current $T = 100^\circ\text{C}$	$I_R$	10				5		2		mA	
Junction capacitance	$C_J$	110				80				pF	$V = 4\text{V}, f = 1\text{MH}$

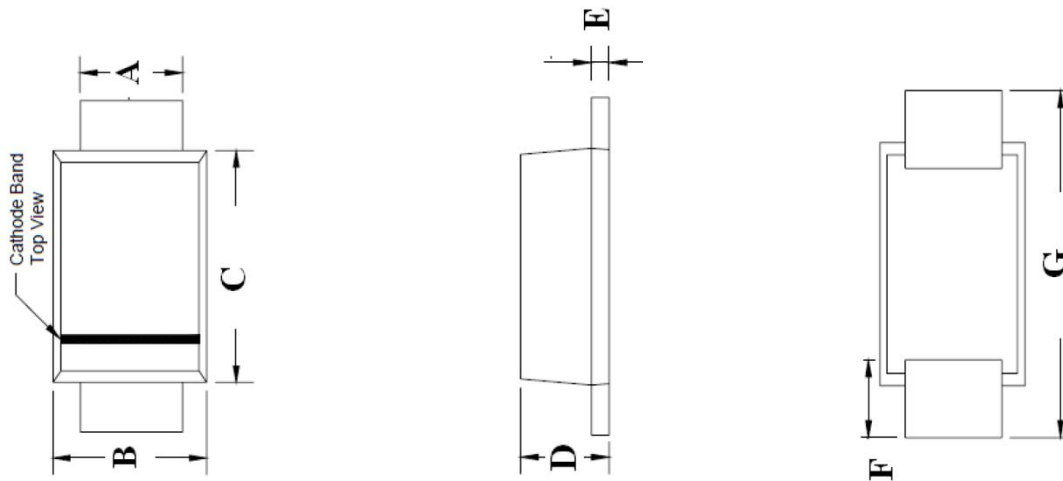
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**Typical Characteristics**



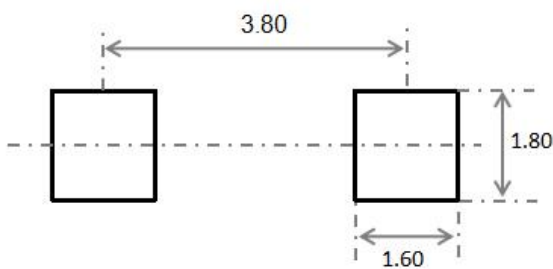
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**SMAF Package Outline Dimensions**



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**



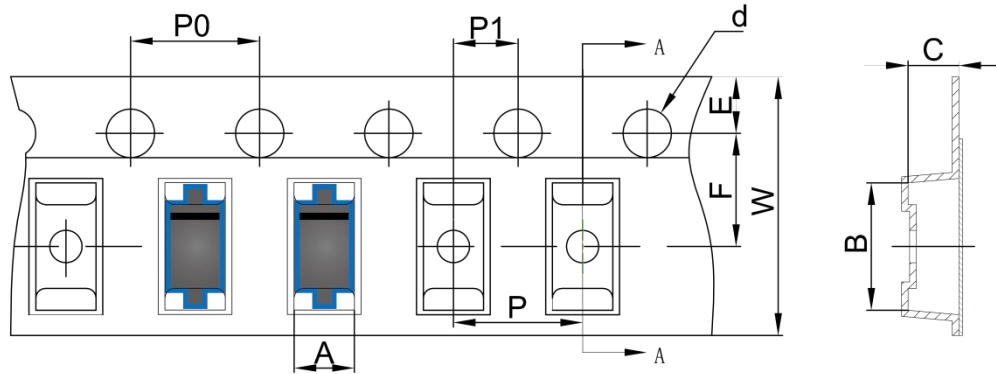
**Note:**

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

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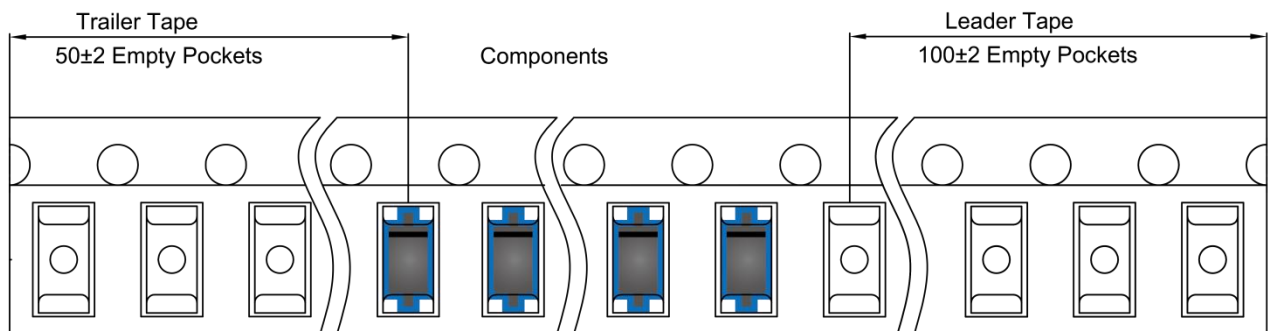
**SMAF Tape and Reel**

**SMAF Embossed Carrier Tape**

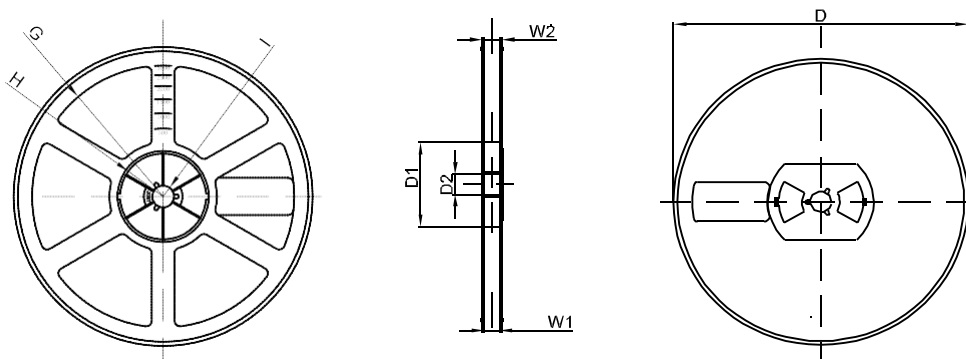


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMAF	2.79	5.35	1.48	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**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