

SMAF Surface Mount Schottky Barrier Rectifier

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

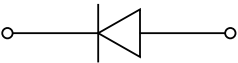
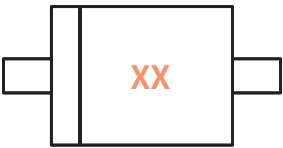
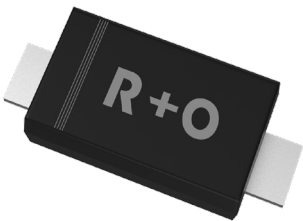
Mechanical Data

- Case: SMAF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
20-200 V
Forward Current
3 Ampere

SMAF



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS32F	SS33F	SS34F	SS35F	SS36F	SS38F	SS310F	SS315F	SS320F
Device marking code			SS32F	SS33F	SS34F	SS35F	SS36F	SS38F	SS310F	SS315F	SS320F
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V _{RMS}	V	14	21	28	35	42	56	70	105	140
Maximum DC blocking Voltage	V _{DC}	V	20	30	40	50	60	80	100	150	200
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load,TL (Fig.1)	I _{F(AV)}	A	3.0								
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I _{FSM}	A	80								
Storage temperature	T _{stg}	°C	-55 ~ +150								
Junction temperature	T _j	°C	-55 ~ +125			-55 ~ +150					
Typical Thermal Resistance	R _{θJ-A}	°C /W	70								
	R _{θJ-L}	°C /W	20								

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS32F	SS33F	SS34F	SS35F	SS36F	SS38F	SS310F	SS315F	SS320F
Maximum instantaneous forward voltage	I _F =3.0A	V _F	V	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	mA	0.2					0.05			
	V _R =V _{DC} , T _A =100°C	I _{R2}		20					5.0			
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	250			180					

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

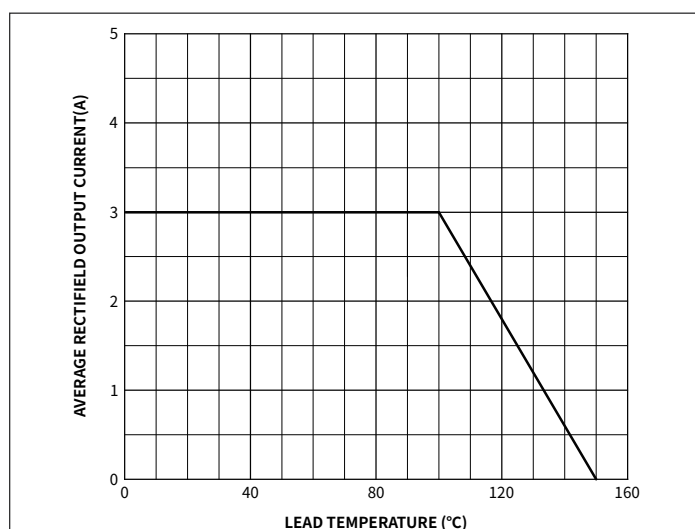


Fig.1 Forward Current Derating Curve

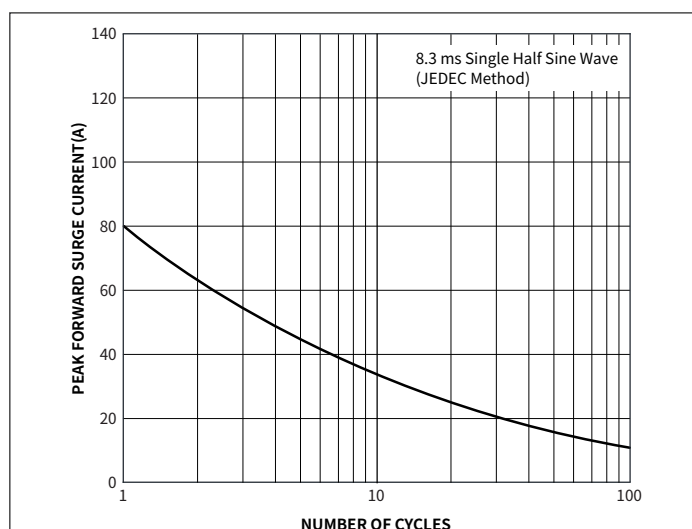


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

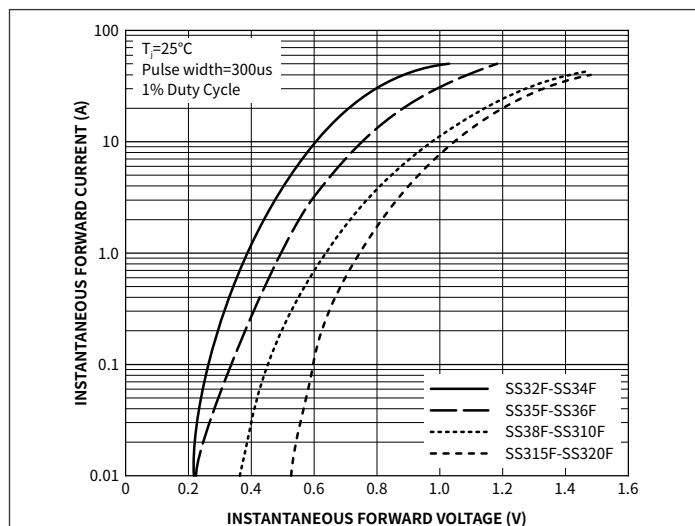


Fig.3 Typical Forward Voltage

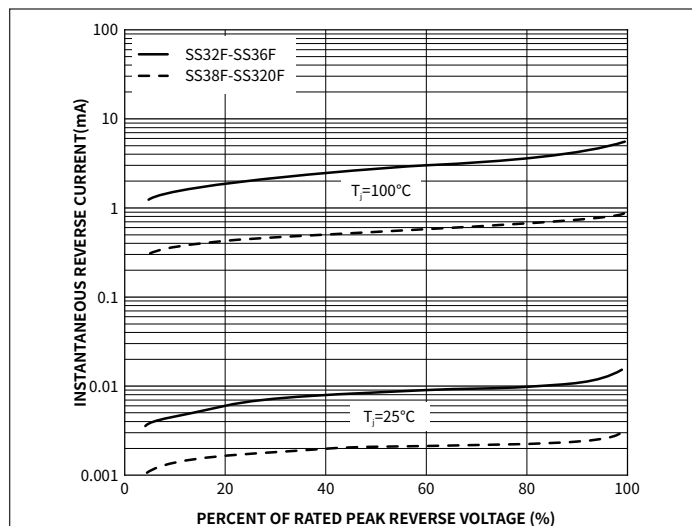


Fig.4 Typical Reverse Characteristics

SS32F THRU SS320F

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMAF	R1	0.034	3000	12000	120000	7"
SMAF	R2	0.034	7500	15000	120000	11"
SMAF	R3	0.034	7500	/	120000	13"

● Package Outline Dimensions (SMAF)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.30	1.60	0.051	0.063
B	3.30	3.70	0.129	0.145
C	2.40	2.70	0.094	0.105
D	4.40	4.90	0.172	0.191
E	0.90	1.20	0.035	0.047
F	0.80	1.20	0.031	0.047
G	0.12	0.20	0.005	0.008

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	1.80	-	0.070	-
J	1.60	-	0.063	-
K	-	2.2	-	0.086