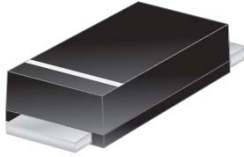




SM5xxxAFS SERIES



Schottky Barrier Rectifiers



SMAF-S

Primary Characteristics

I_F	5	A
V_{RRM}	20~200	V
I_{FSM}	100	A
V_F	0.55、0.7、0.85、0.92	V
T_J max	125、150	°C

Features

- Schottky barrier chip
- Low power loss, high efficiency
- Ideally suited for automatic assembly
- Surge overload rating to 100A peak

Mechanical Data

- Case : Molded plastic SMAF-S
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band
- Weight : 0.028 grams (approximate)

Ordering Information

Part No.	Remark	Package	Packing
SM5xxxAFS	RoHS Compliant	SMAF-S	10000 / Tape & Reel
SM5xxxAFS-H	Halogen Free		
SM5xxxAFS-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	SM5 20AFS	SM5 30AFS	SM5 40AFS	SM5 50AFS	SM5 60AFS	SM5 80AFS	SM5 100AFS	SM5 150AFS	SM5 200AFS	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	I _F	5									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	100									A
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	V _F	0.55			0.7		0.85		0.92		V
Maximum DC Reverse Current @ T _J =25°C at Rated DC Blocking Voltage @ T _J =100°C	I _R	0.5 10					0.2 5				mA
Typical Junction Capacitance (NOTE 1)	C _J	170					110				pF
Typical Thermal Resistance	R _{θJA}	120									°C/W
Operating Temperature Range	T _J	-55 to +125					-55 to +150				°C
Storage Temperature Range	T _{STG}	-55 to +150									°C
Marking Code		S520	S530	S540	S550	S560	S580	S5100	S5150	S5200	

NOTES :

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

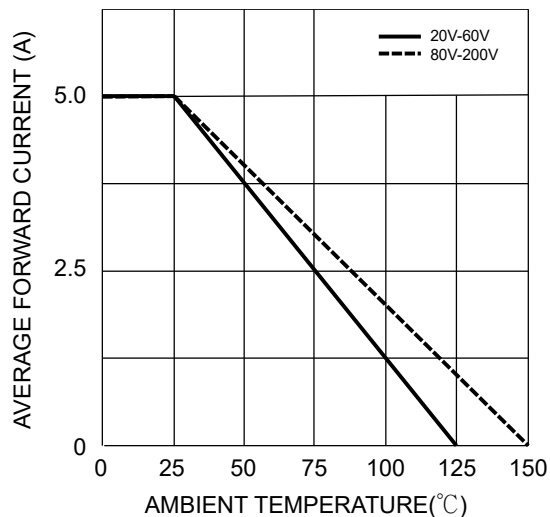


FIG. 2-Typical Forward Characteristics

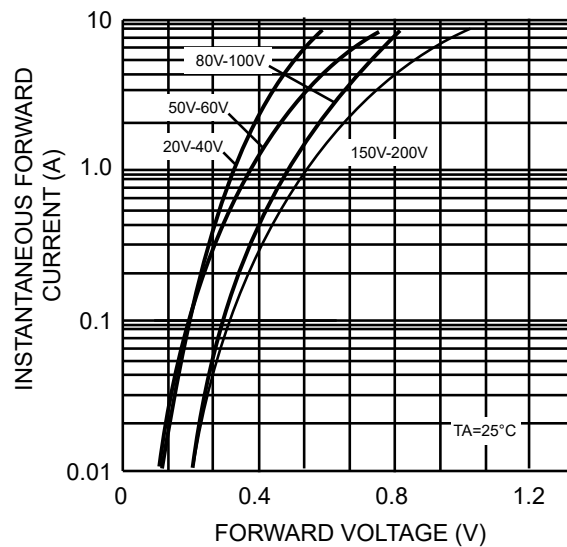


FIG. 3-Maximum Non-Repetitive Forward Surge Current

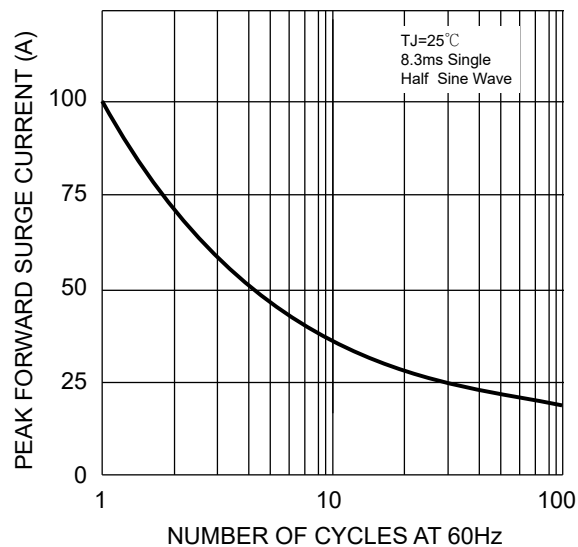
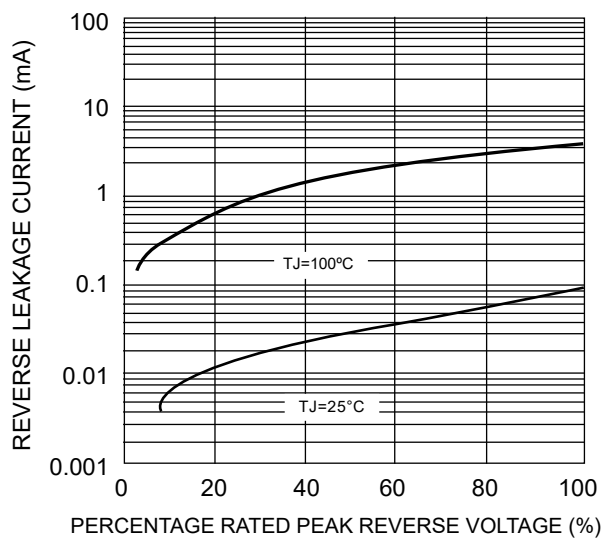
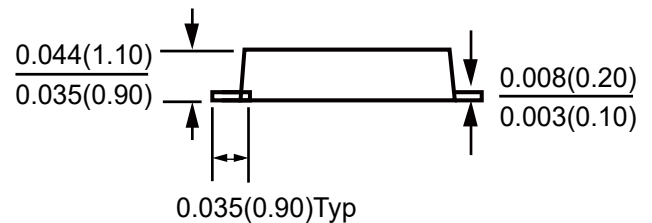
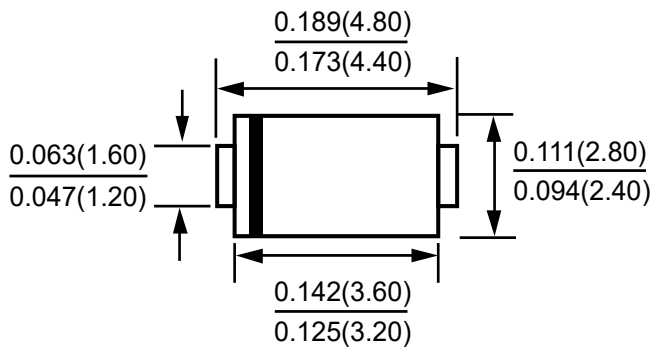


FIG. 4-Typical Reverse Characteristics





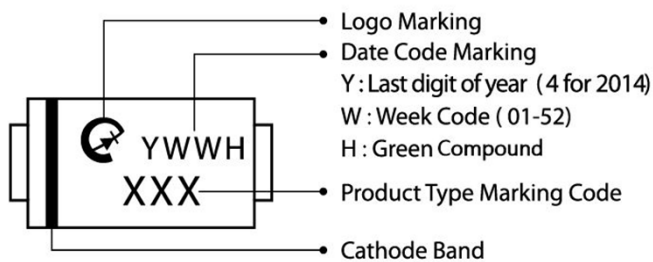
Package Outline Dimensions



SMAF-S

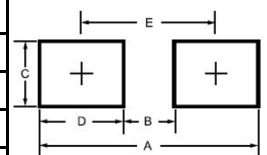
Dimensions in inches and (millimeters)

Marking Information



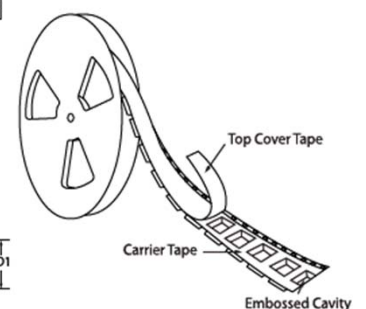
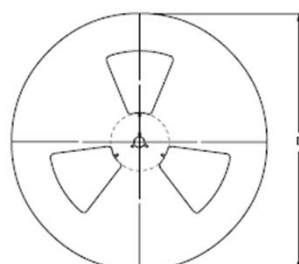
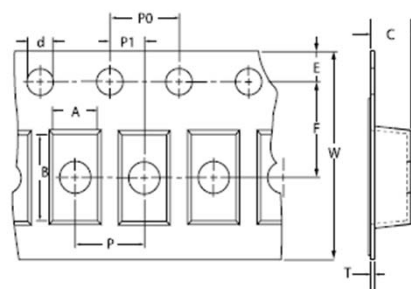
Suggested Pad Layout

Outline Dimension	SMAF-S (mm)
A	5.70
B	2.50
C	1.50
D	1.60
E	-



Tape & Reel Specification

Item	Symbol	SMAF-S (mm)
Carrier width	A	2.83 ± 0.1
Carrier length	B	4.75 ± 0.1
Carrier depth	C	1.42 ± 0.1
Sprocket hole	d	1.55 ± 0.05
Reel outside diameter	D	330 ± 1.0
Feed hole diameter	D0	13 ± 0.5
Reel inner diameter	D1	100 ± 0.5
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	5.5 ± 0.05
Sprocket hole pitch	P	4.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.05
Overall tape thickness	T	0.25 ± 0.05
Tape width	W	12 ± 0.15
Reel width	W1	12.4 ± 0.5
Reel width	W2	18.4 (max)





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