



Schottky Barrier Rectifiers



DO-221AC(SMAF)

Primary Characteristics

I_F	5	A
V_{RRM}	20~200	V
I_{FSM}	100	A
V_F	0.55 , 0.70 , 0.85 , 0.87 , 0.90	V
T_J max	125,150	°C

Features

- Low Profile Package
- Ideal for Automated Placement
- Guard Ring for Over Voltage Protection
- Low Forward Voltage Drop

Mechanical Data

- Case : DO-221AC (SMAF)
- 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

Ordering Information

Part No.	Remark	Package	Packing
SM5xxxAF	RoHS Compliant	SMAF	10000 / Tape & Reel
SM5xxxAF-H	Halogen Free		
SM5xxxAF-Q	AEC-Q101 qualified		

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

Parameter	Symbol	SM5 20AF	SM5 30AF	SM5 40AF	SM5 50AF	SM5 60AF	SM5 80AF	SM5 100AF	SM5 150AF	SM5 200AF	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	5.0									A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100.0									A
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	V_F	0.55			0.70		0.85		0.87	0.90	V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I_R	0.5 10					0.2 5.0				mA
Typical Junction Capacitance (NOTE1)	C_j	300			210		170		150	110	pF
Typical Thermal Resistance	$R_{\theta JA}$	120									°C/W
Operating Temperature Range	T_J	-55 to +125					-55 to +150				°C
Storage Temperature Range	T_{STG}	-55 to +150									°C

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

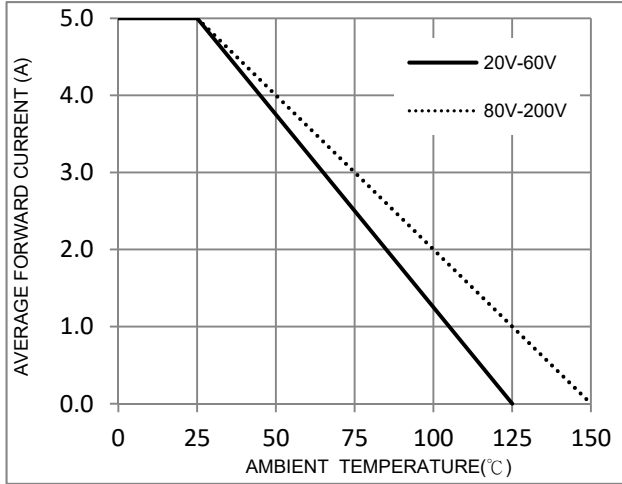


FIG. 2-Typical Forward Characteristics

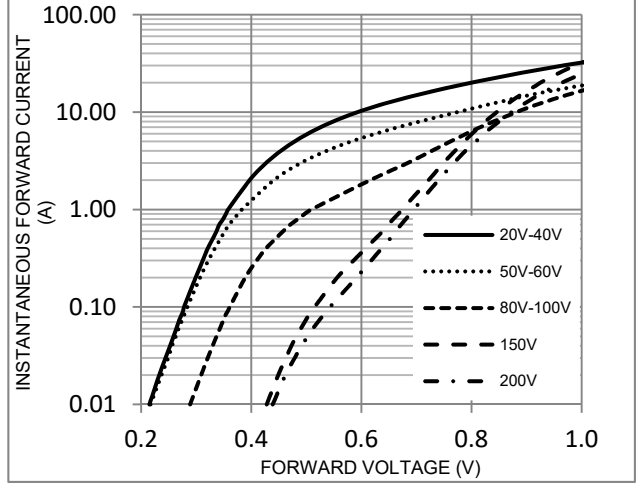


FIG. 3-Maximum Non-Repetitive Forward Surge Current

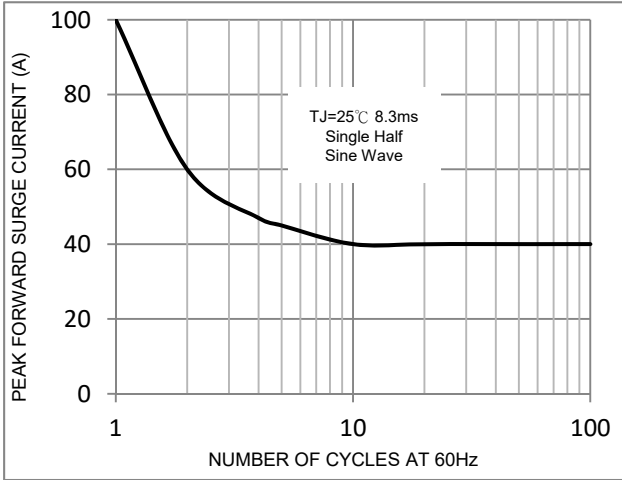


FIG. 4-Typical Reverse Characteristics

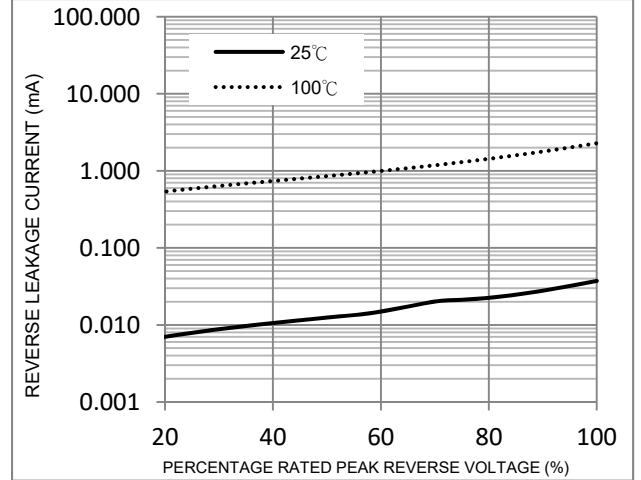
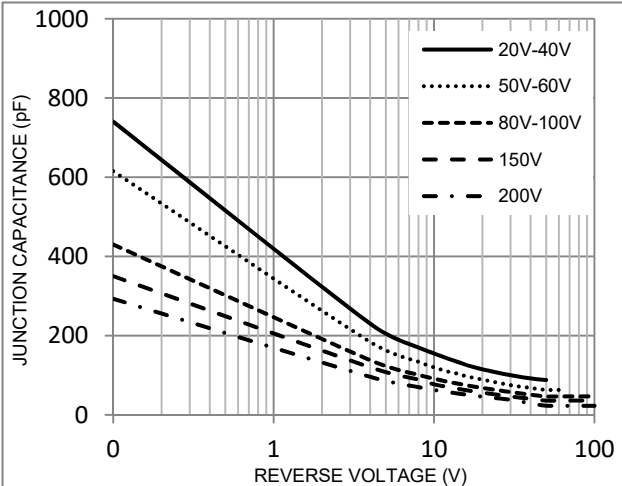
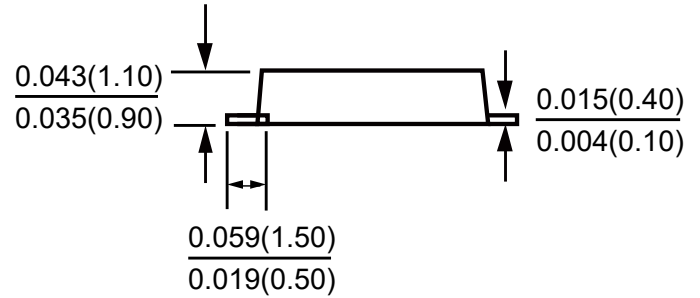
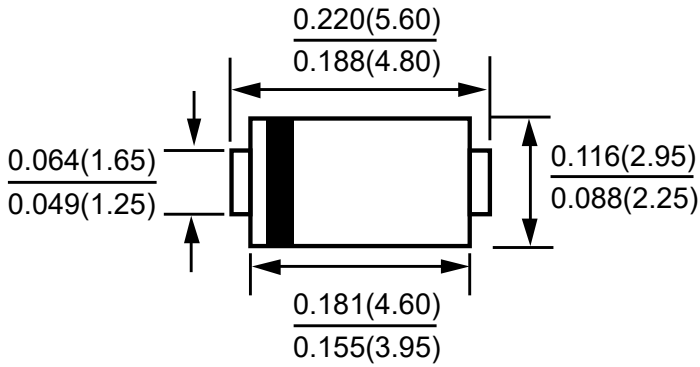


FIG. 5-Typical Junction Capacitance





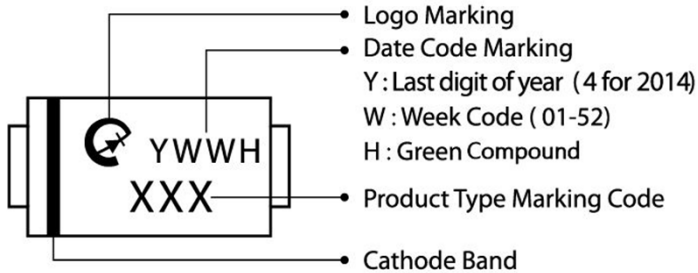
Package Outline Dimensions



DO-221AC(SMAF)

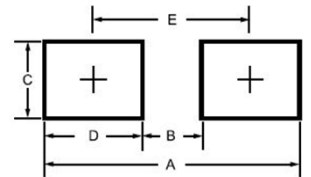
Dimensions in inches and (millimeters)

Marking Information



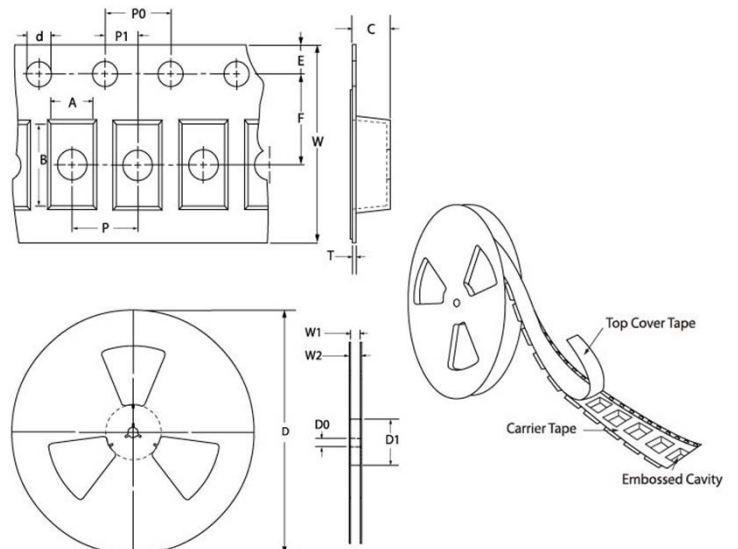
Suggested Pad Layout

Outline Dimension	SMAF (mm)
A	6.50
B	1.50
C	1.70
D	2.50
E	4.00



Tape & Reel Specification

Item	Symbol	SMAF(mm) DO-221AC
Carrier width	A	3 ± 0.1
Carrier length	B	5.6 ± 0.1
Carrier depth	C	1.2 ± 0.1
Sprocket hole	d	1.50 ± 0.1
Reel outside diameter	D	330 ± 2.0
Feed hole diameter	D0	13.5 ± 1
Reel inner diameter	D1	50 (min.)
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 ± 0.05
Embossment center	P1	2.0 ± 0.05
Overall tape thickness	T	0.25 ± 0.05
Tape width	W	12.0 ± 0.2
Reel width	W2	18.4 (max)
Reel width	W1	14.4 (max)





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