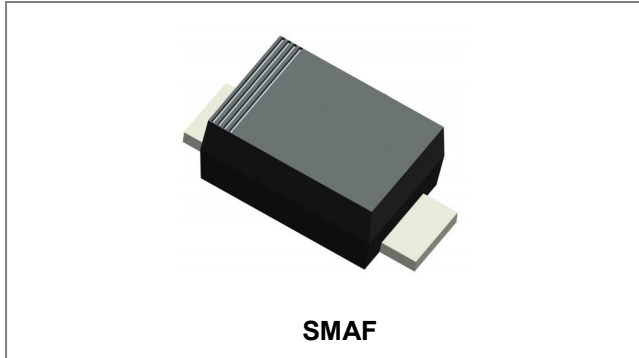


## RS3AAF THRU RS3MAF FAST RECOVERY RECTIFIERS



### Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/ EU directives
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC SMAF molded plastic body
- Terminals: leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.038 grams
- Mounting Position: Any

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

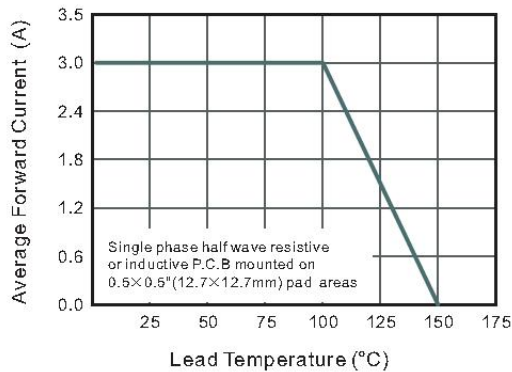
Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Type Number	Symbol	RS3A AF	RS3B AF	RS3D AF	RS3G AF	RS3J AF	RS3K AF	RS3M AF	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$								
DC Blocking Voltage	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average forward rectified output current @ $T_L = 100^\circ\text{C}$	$I_o$	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	90							A
Forward Voltage @ $I_F = 3.0\text{A}$	$V_F$	1.3							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_{RM}$	5.0 150							$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	160							ns
Typical Junction Capacitance (Note 2)	$C_J$	60							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

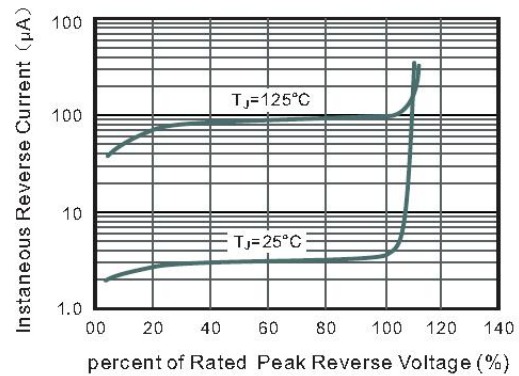
Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4V D.C  
 3. P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

**Ratings and Characteristics Curves**

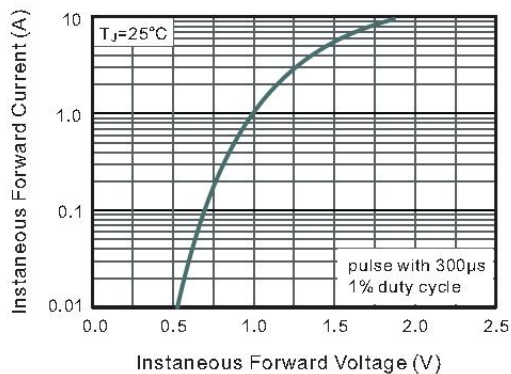
**Fig.1 Forward Current Derating Curve**



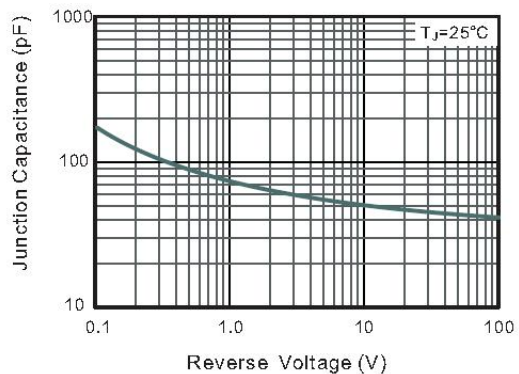
**Fig.2 Typical Reverse Characteristics**



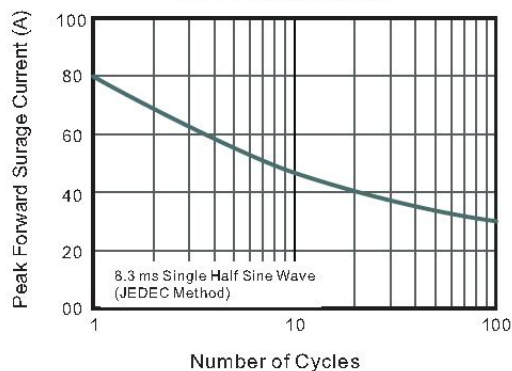
**Fig.3 Typical Instantaneous Forward Characteristics**



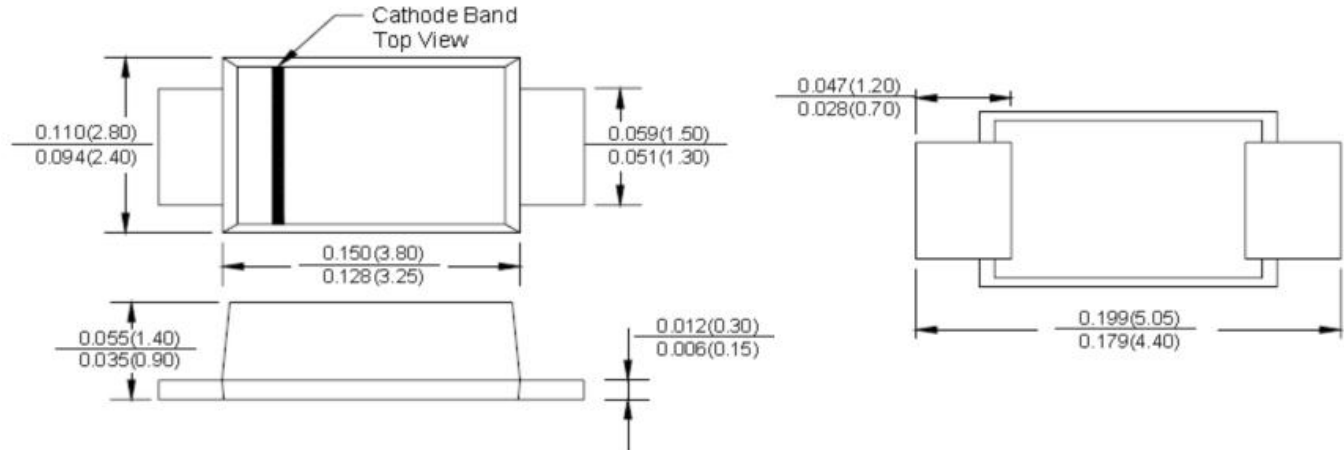
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Mechanical Dimensions SMAF (Millimeters/Inches)**



**Ordering Information**

Device	Package	Shipping
RS3AAF THRU RS3MAF	SMAF (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

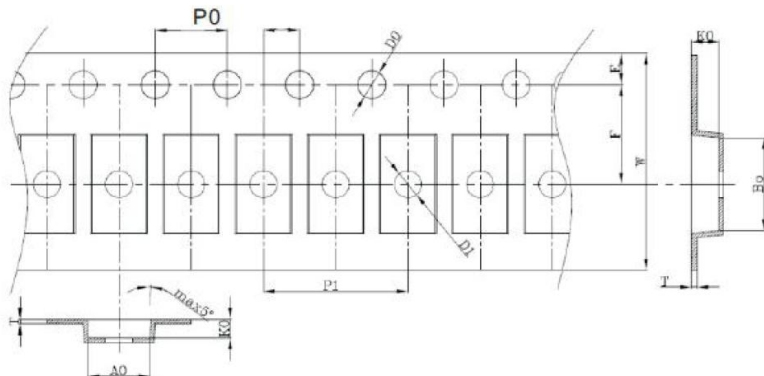
**Marking Diagram**



Where XXXXX is YYWWL

RS3AAF = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Carrier Tape Specification SMAF**



SYMBOL	Millimeters	
	Min.	Max.
A0	2.83	3.03
B0	2.23	5.43
K0	1.23	1.43
P0	3.90	4.10
P1	3.90	4.10
P2	1.90	2.10
T	0.17	0.23
E	1.63	1.83
F	5.45	5.65
D0	1.50	1.60
D1	1.45	1.55
W	11.70	12.30



RS3AAF  
THRU  
RS3MAF

**Technical Data**  
**Data Sheet N1670, Rev. B**



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