

**1.0A Surface Mount Ultra Super Rectifiers - 50V~600V**

PRIMARY CHARACTERISTICS	
$V_{RRM}$	50V~600V
$I_{(AV)}$	1.0A
$V_F$	0.95V, 1.25V, 1.7V
$T_{J,Max}$	150°C

**SCHEMATIC DIAGRAM  
SMAF PACKAGE**

Marking : Ex

x : 1,2,3,4,5,6,8

Ex : EFM108AF



**FEATURES**

- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Superfast recovery times for high efficiency
- High temperature soldering : 250°C /10 seconds at terminals
- Moisture Sensitivity Level 1

**MECHANICAL DATA**

- Case : Molded plastic, SMAF
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

**Maximum Ratings and Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.\*Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	EHO 323 AF	EHO 324 CH	EHO 325 CH	EHO 326 CH	EHO 327 CH	EHO 328 CH	EHO 32: CH	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current See Fig.2	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amp
Maximum Forward Voltage at 1.0A	$V_F$	0.95			1.25		1.70		Volts
Maximum Reverse Current at $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=125^\circ C$	$I_R$	5.0 100							$\mu A$ mp
Typical Junction Capacitance (Note 1)	$C_J$	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80							°C/W
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	35							nS
Operating Junction Temperature Range	$T_J$	-55 to +150							°C
Storage Temperature Range	$T_{stg}$	-55 to +150							°C

**NOTES:**

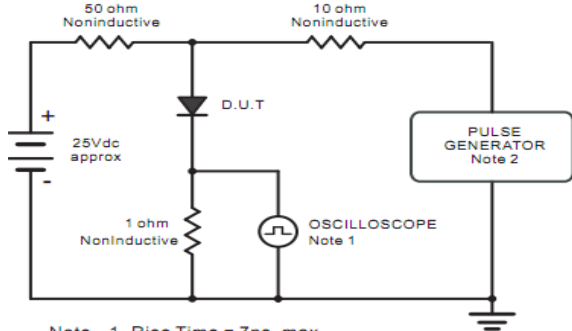
1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to ambient mounted on P.C.B. with 5.0 x 5.0mm copper pad areas

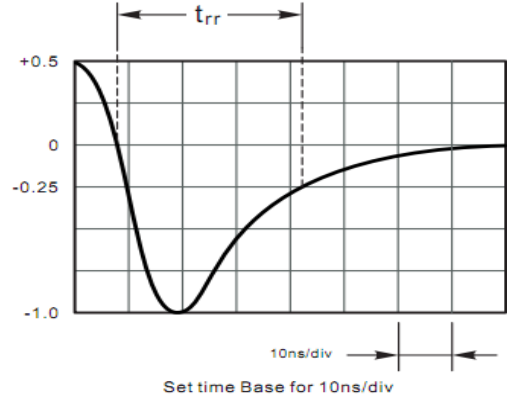
3- Reverse Recovery Test Conditions:  $I_F=.5A$ ,  $I_R=1A$ ,  $I_{RR}=.25A$ .

## RATINGS AND CHARACTERISTIC CURVES

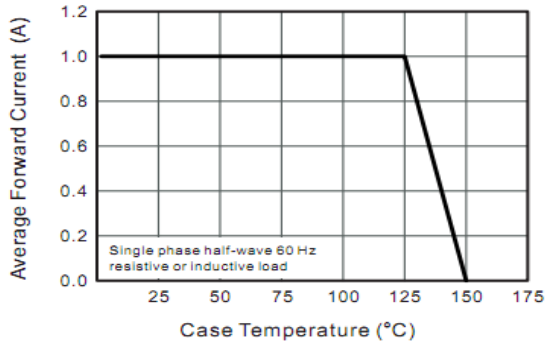
**Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram**



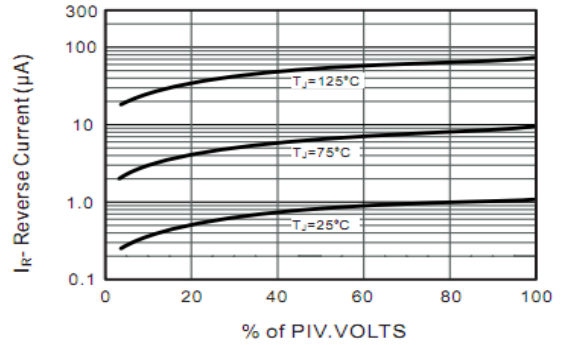
Note: 1. Rise Time = 7ns, max.  
Input Impedance = 1megohm, 22pF.  
2. Rise Time = 10ns, max.  
Source Impedance = 50 ohms.



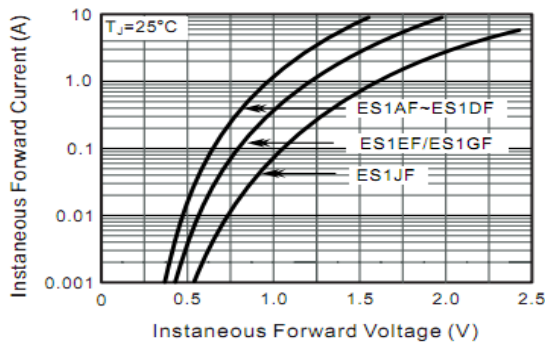
**Fig.2 Maximum Average Forward Current Rating**



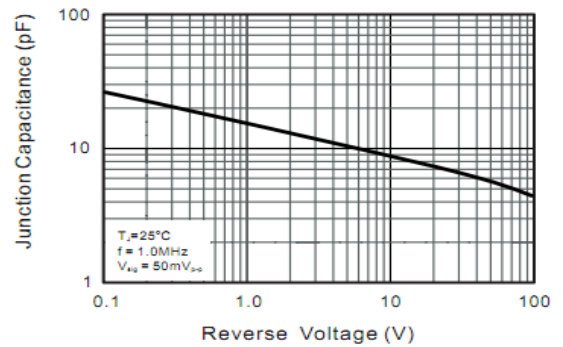
**Fig.3 Typical Reverse Characteristics**



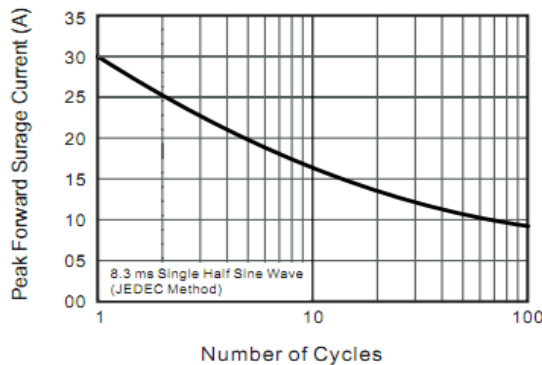
**Fig.4 Typical Forward Characteristics**



**Fig.5 Typical Junction Capacitance**

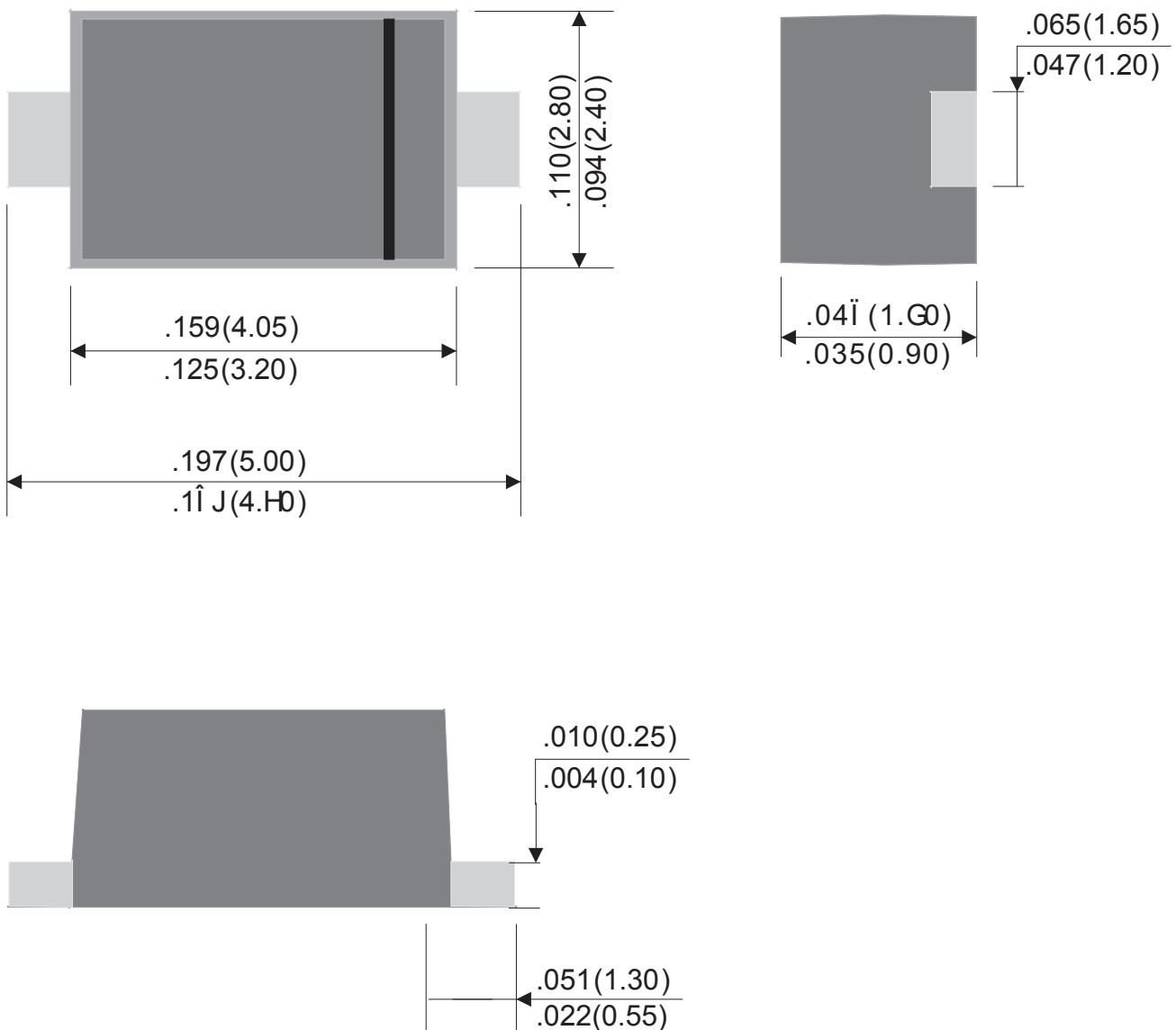


**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**



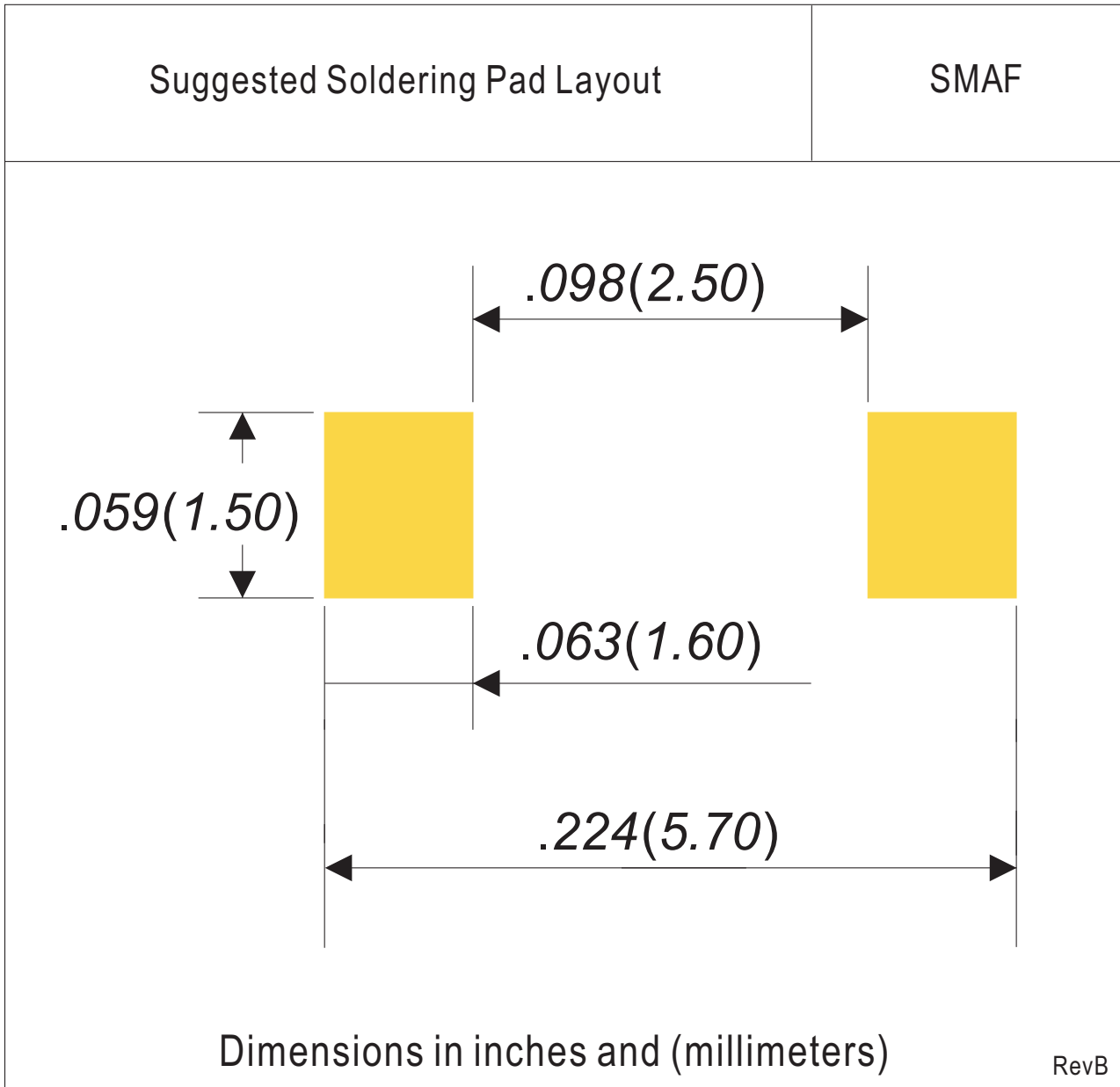
# Outline Drawing

SMAF(DO-221AC)



Dimensions in inches and (millimeters)

Rev.G



RevB

### Ordering Information:

Device PN	Packing
Part Number -T <sup>(1)</sup> G <sup>(2)</sup> -WS <sup>(3)</sup>	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" : Halogen free product for packing code suffix "H"

(3) Willas brand abbreviation, Label Type does not display

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