WILLAS

RoHS COMPLIANT

EFM101AF THRU EFM108AF

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℃

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℃ ambient temperature unless otherwise specified. Single phase, half wave, 60H_Z, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	*EFM101 AF*	*EFM102 AF*	*EFM103 AF*	*EFM104 AF*	*EFM105 AF*	*EFM106 AF*	*EFM108 AF*	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℃ at Rated DC Blocking Voltage T_A=125℃	I_R	5.0 100							**μAmp**
Typical Junction Capacitance (Note 1)	C_J	15							**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80							**℃/W**
Maximum Reverse Recovery Time (Note 3)	T_{RR}	35							**nS**
Operating Junction Temperature Range	T_J	-55 to +150							**℃**
Storage Temperature Range	Tstg	-55 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z 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.

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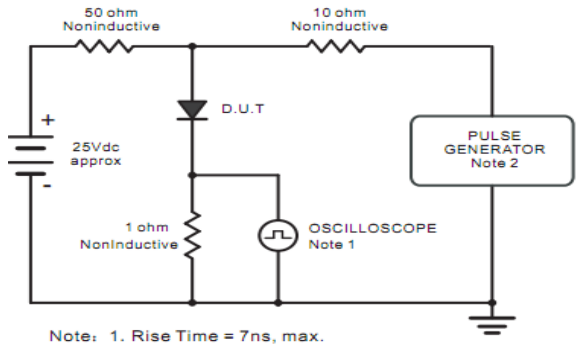
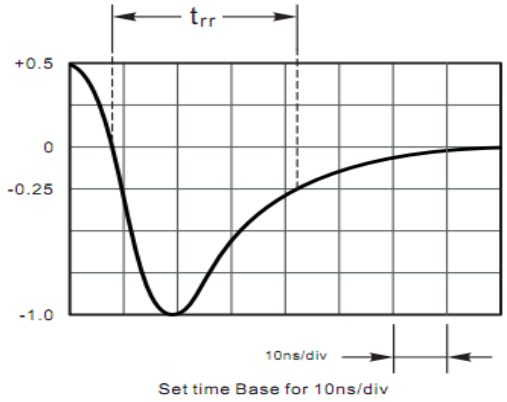
RATINGS AND CHARACTERISTIC CURVES

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

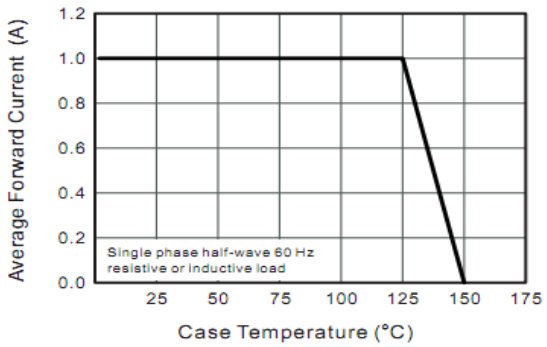


Fig.3 Typical Reverse Characteristics

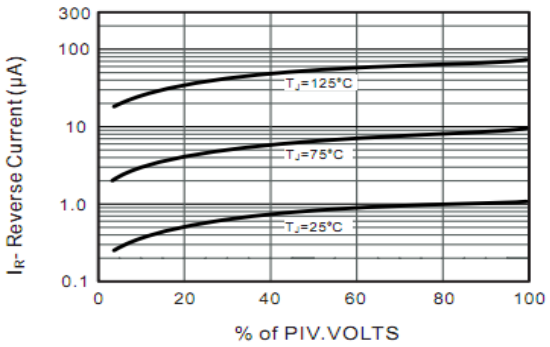


Fig.4 Typical Forward Characteristics

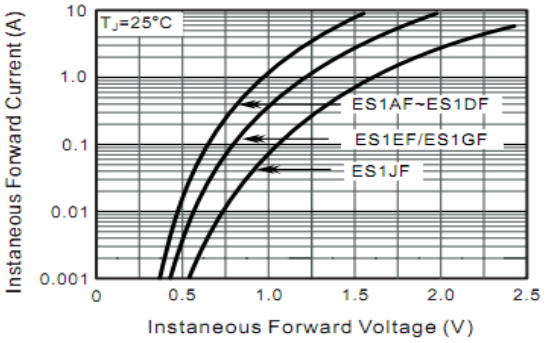


Fig.5 Typical Junction Capacitance

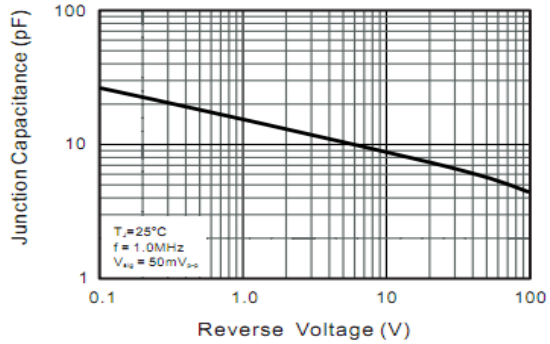
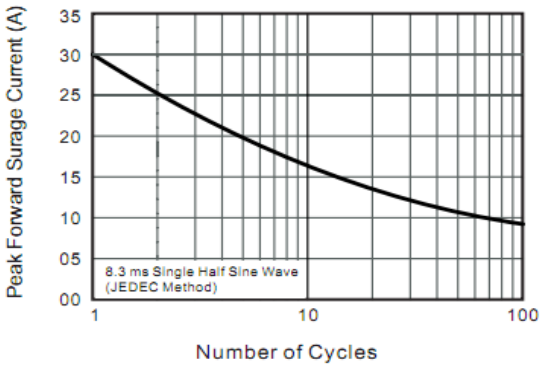
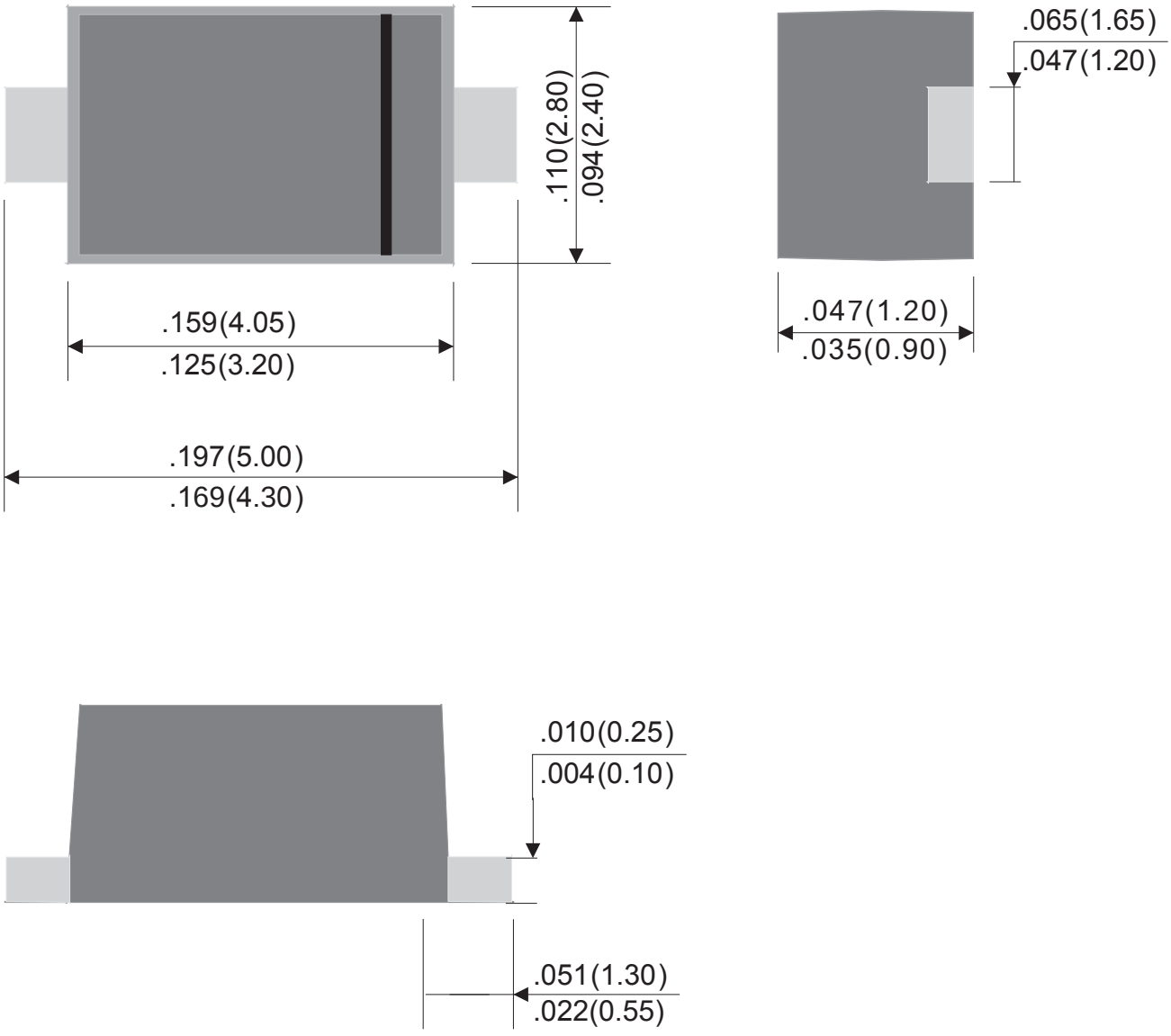


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



Outline Drawing

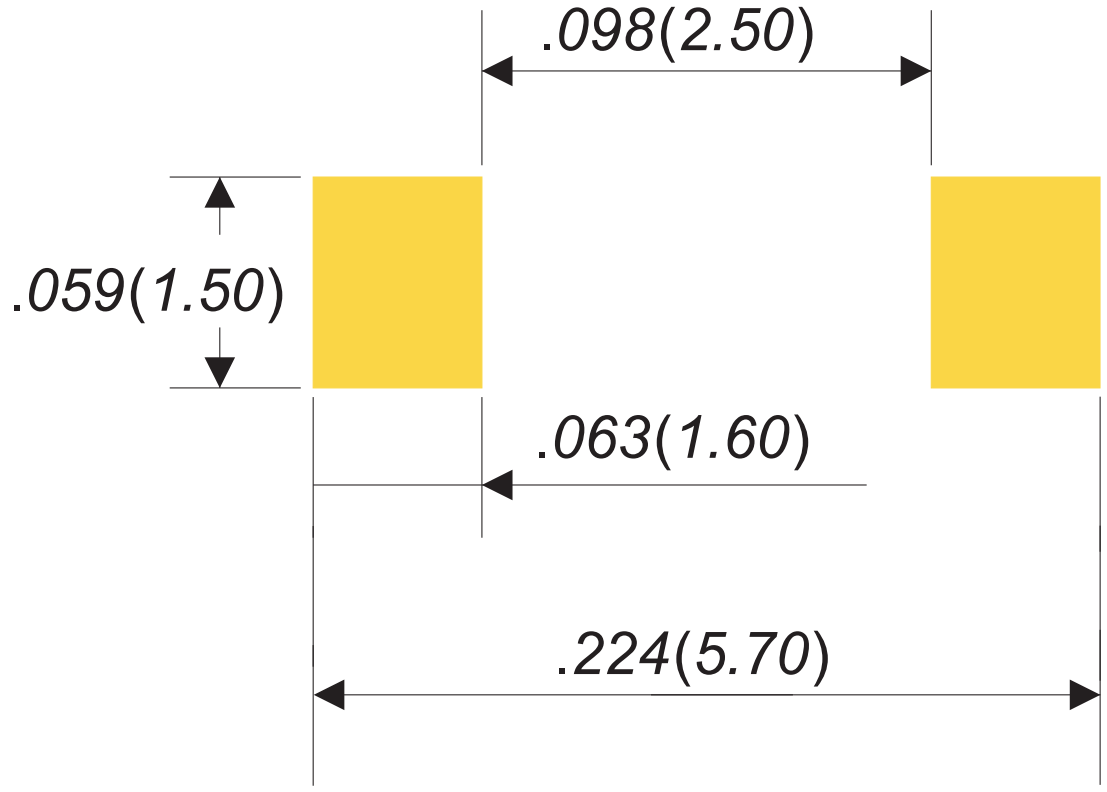
SMAF(DO-221AC)



Dimensions in inches and (millimeters)

Rev.G

Suggested Soldering Pad Layout	SMAF



Dimensions in inches and (millimeters)

RevB

Ordering Information:

Device PN	Packing
Part Number -T(1)G(2)-WS(3)	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