YFW
佑风微

ES3AF THRU ES3JF SMAF

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 600 V

Forward Current - 3 A

Pinning

1.Cathode	2.Anode

SMAF

FEATURES

- Glass Passivated Chip Junction
- For surface mounted applications
- Low profile package
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg /0.00095oz

Marking Code	
ES3AF	ES3A
ES3BF	ES3B
ES3DF	ES3D
ES3GF	ES3G
ES3JF	ES3J

Absolute Maximum Ratings and characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	ES3AF	ES3BF	ES3DF	ES3GF	ES3JF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current at T_c = 125 °C	$I_{F(AV)}$	3					A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	100					A
Maximum Instantaneous Forward Voltage at 3 A	V_F	0.95			1.25	1.65	V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a=125 °C	I_R	5 100					μA
Typical Junction Capacitance at V_R=4V,f=1MHZ	C_j	40					pF
Maximum Reverse Recovery Time (1)	Trr	40					nS
Typical Thermal Resistance (2)	$R_{\theta JA}$/ $R_{\theta JC}$	50/16					°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150					°C

(1) **Measured with I_F=0.5A,I_R=1A,I_n=0.25A**

(2) **P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.**

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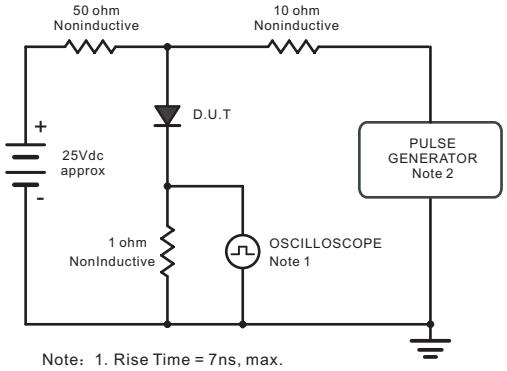
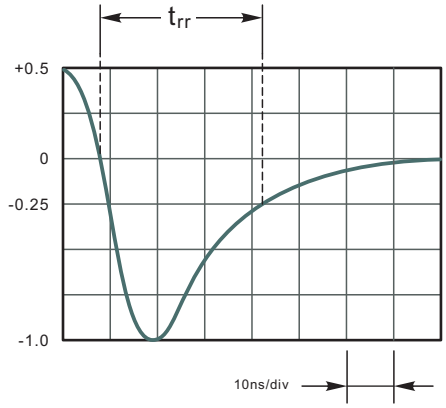
Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

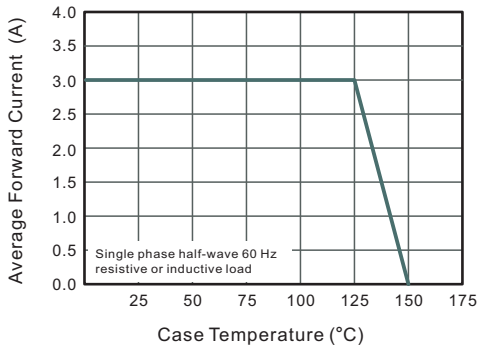


Fig.3 Typical Reverse Characteristics

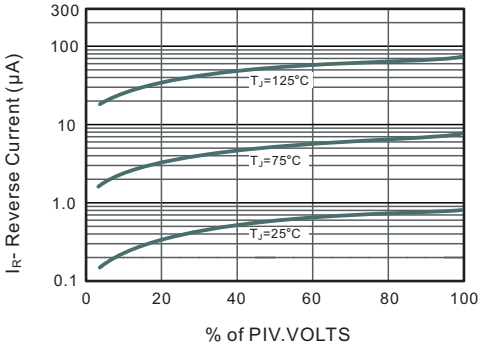


Fig.4 Typical Forward Characteristics

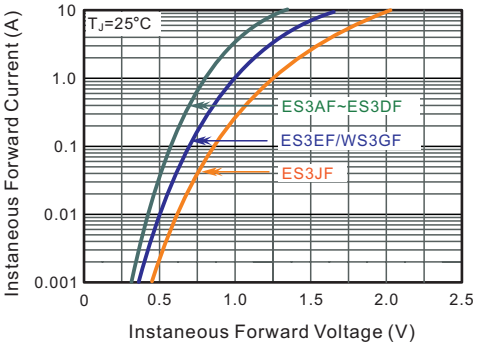


Fig.5 Typical Junction Capacitance

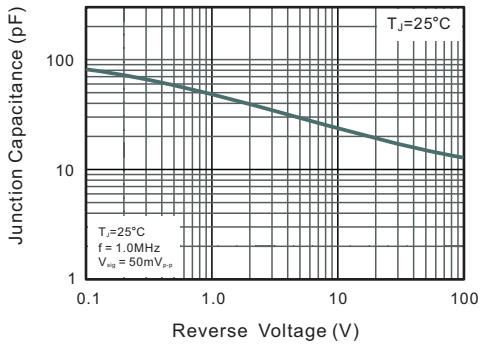
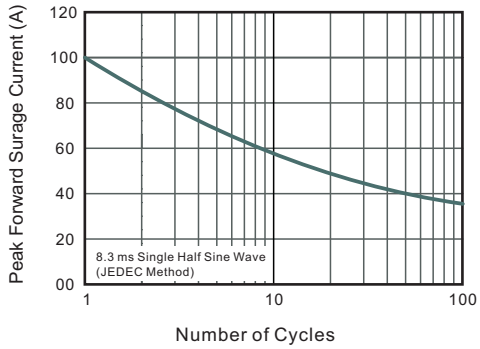


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



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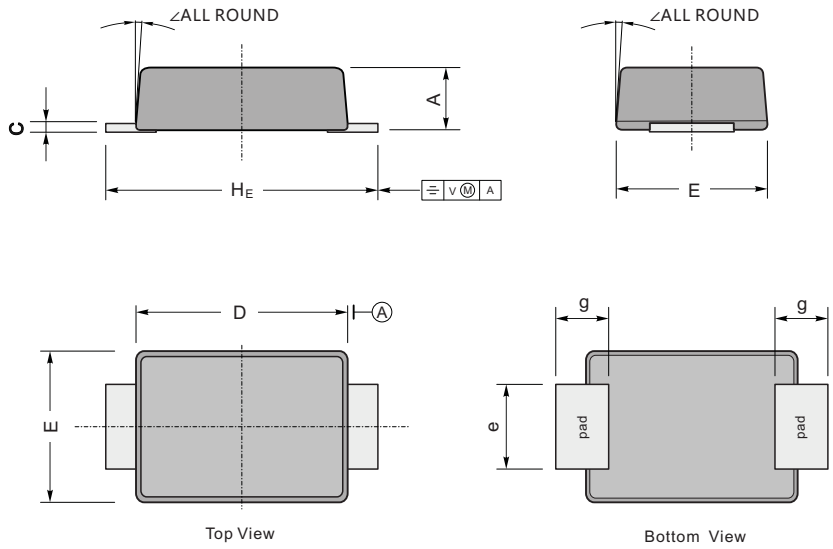
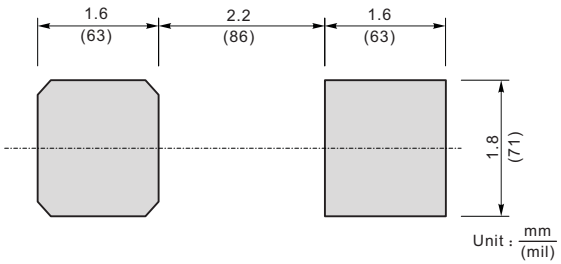
Package Outline SMAF

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMAF	Tape/Reel,13"reel	10000	EIA-481-1
	Tape/Reel,7"reel	3000	EIA-481-1

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