



ES1A THRU ES1J

1.0AMP SUPERFAST RECOVERY RECTIFIER

Features

Fast switching for high efficiency
 Low Power Loss High Efficiency
 Plastic Case Material has UL Flammability
 Classification Rating 94V-0

Mechanical Data

Case Molded plastic SMAF
 Terminals Plated leads solderable per
 Mil-STD-750 Method 2026
 Polarity Color band or Cathode Notch
 Mounting Position Any
 Making Type Number

Maximum Ratings and Electrical Characteristics

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



DIM	INC HES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.13	0.15	3.2	3.8	
B	0.09	0.11	2.3	2.7	
C	0.03	0.05	0.8	1.2	
D	0.16	0.2	4	5	
E	/	0.01	/	0.3	
F	0.04	0.08	1	2	

Type Number	SYMBOL	ES1A	ES1B	ES1D	ES1G	ES1J	Unit
Maximum Recurrent 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
Average Rectified Output Current @ $T_L = 100^\circ C$	$I_F(AV)$	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25					A
Rating for fusing ($t < 8.3ms$)	$I^2 t$	5.08					$A^2 s$
Forward Voltage @ $I_F = 1.0A$	V_{FM}	0.95		1.25		1.7	V
Peak Reverse Current @ $T_A = 25^\circ C$	I_R	5.0					uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		200					
Maximum Reverse Recovery Time (Note1)	T_{rr}	35					ns
Typical Junction Capacitance (Note 2)	C_J	20			7		pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	34					$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150					$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150					$^\circ C$

- Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$.
 2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
 3. Device mounted on FR-4 substrate, 1" * 1", 2oz, single-sided, PC boards with 0.1" * 0.15" copper pad.



FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

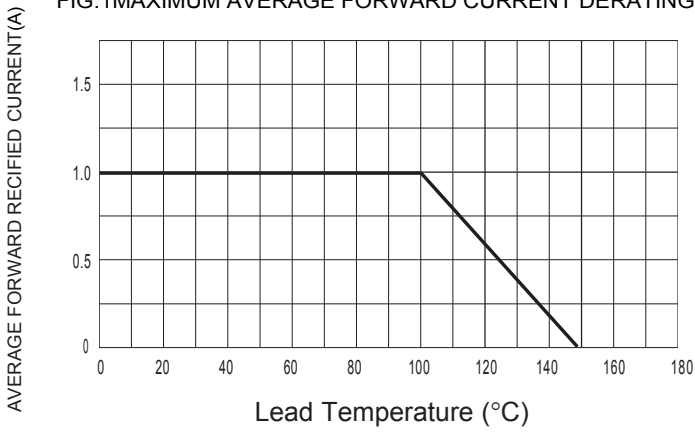


FIG.2 TYPICAL FORWARD CHARACTERISTICS

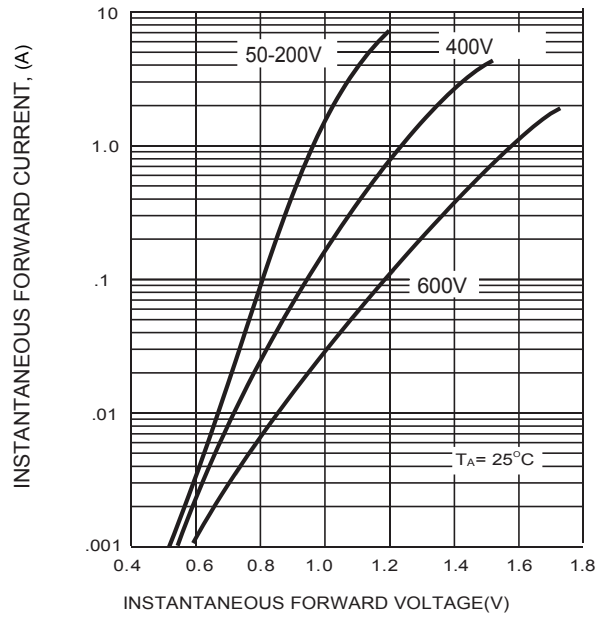


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

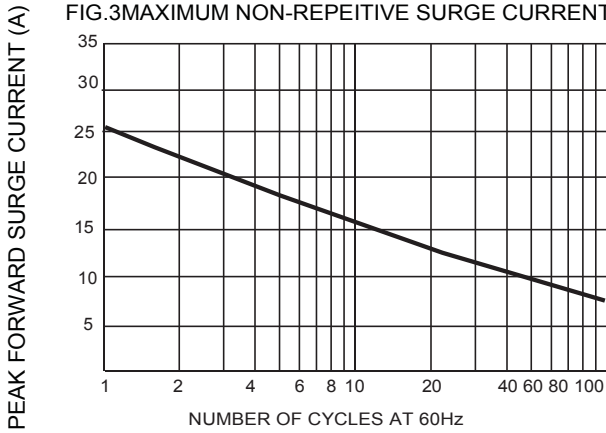


FIG.4 TYPICAL JUNCTION CAPACITANCE

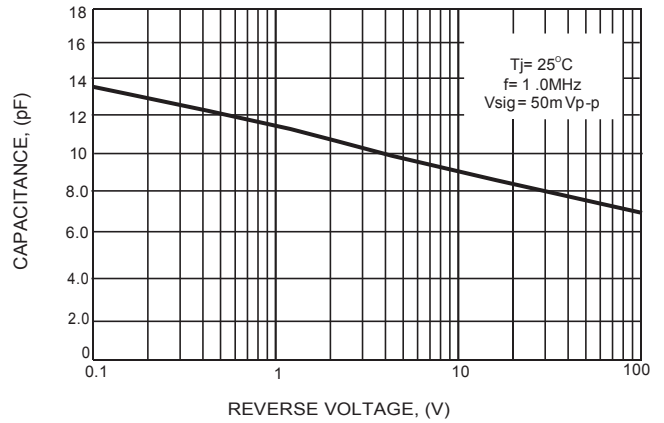
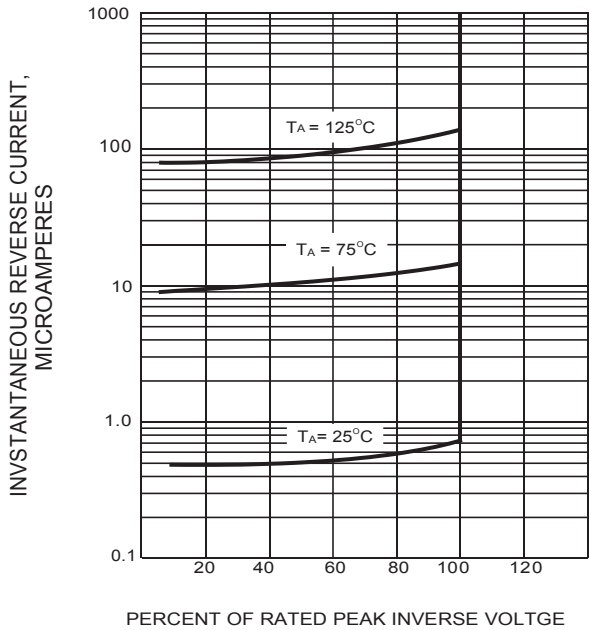
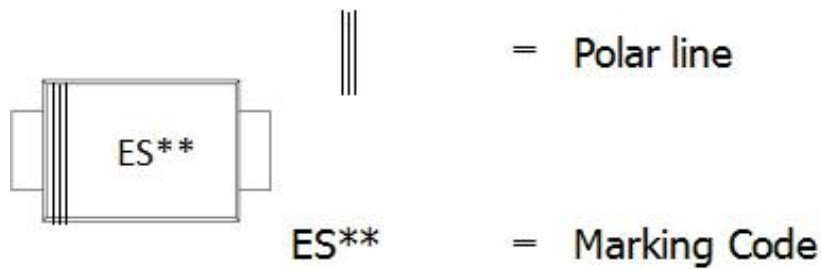


FIG.5 TYPICAL REVERSE CHARACTERISTICS



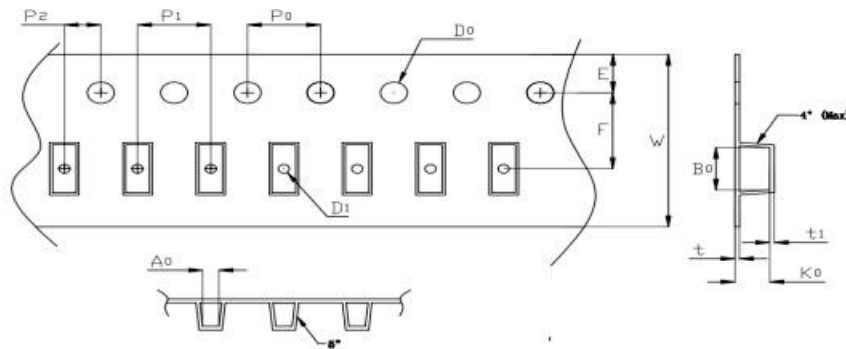


MARKING INFORMATION

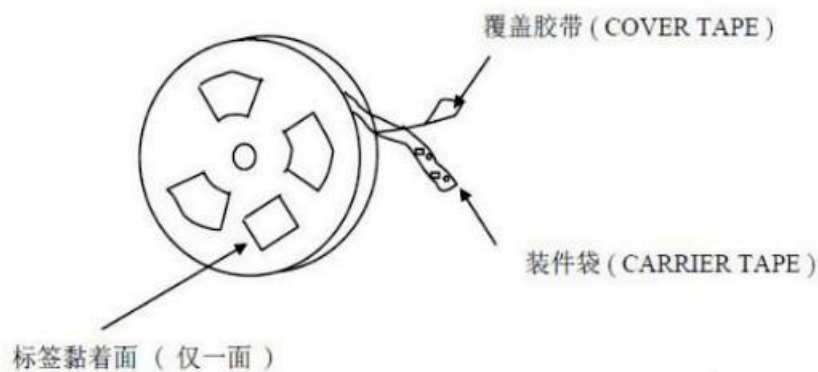


PACKING REQUIRMENTS

. PS transparent anti-static carrier tape packing



Specifications	Carrier tape type	Ao	Bo	Ko	Po	W	t	Explain
SMAF	Anti-static	2.83± 0.10	4.9± 0.10	1.45± 0.05	4.00± 0.10	12.0± 0.10	0.23± 0.05	



DEVICE TYPE	Tape width	7" Reel		
		Q'TY/REEL (pcs)	BOX/CAR TOON	Q'TY/REEL (pcs)
SMAF	12mm	3000	64	192000



注意事项

1. 深圳市华天微电子有限公司的产品销售分为直销和销售代理，无论哪种方式，订货时请与公司核实。
2. 购买时请认清公司商标，如有疑问请与公司本部联系。
3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知

NOTE

1. Shenzhen Huatianwei Electronics co., Ltd sales its product either through direct sales or sales agent , thus, for customers, when ordering , please check with our company.
2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Shenzhen Huatianwei Electronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

联系方式

深圳市华天微电子有限公司

公司地址：广东省深圳市龙华清湖硅谷动力清湖园A14栋3楼

电话：86-755-82047720

网址：www.htwdz.com.cn

邮箱：grf@htwdz.com.cn

CONTACT

SHENZHEN HUATIANWEI ELECTRONICS CO., LTD.

ADD: Floor 3, Building A14, Qinghu Power park, Qinghu Silicon Valley, Longhua, Shenzhen, China

TEL: 86-755-82047720

Web Site: www.htwdz.com.cn

邮箱：grf@htwdz.com.cn