



# ES1AW SERIES

## SURFACE MOUNT SUPERFAST RECTIFIER

**VOLTAGE** 50 to 600 Volt **CURRENT** 1 Ampere

**SMA(W)**

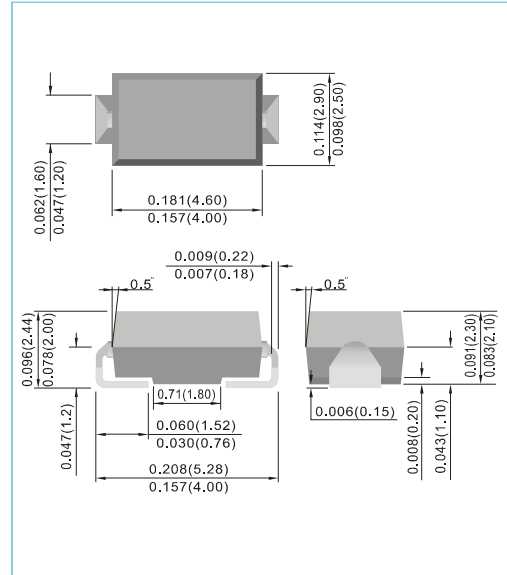
Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0024 ounce, 0.0679 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

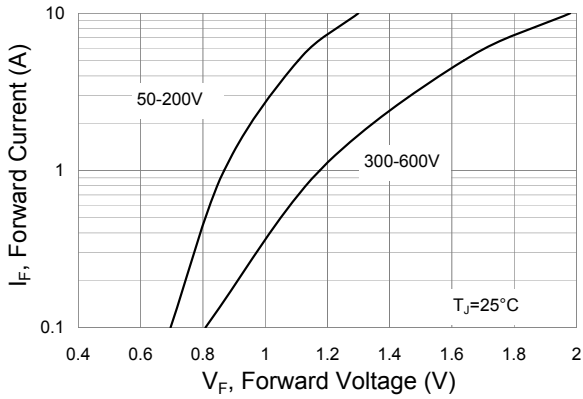
PARAMETER	SYMBOL	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Current at $T_L=105^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum Forward Voltage at 1.0A	$V_F$	0.95			1.25		1.7	V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	1.0				10	$\mu\text{A}$		
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	35				ns			
Typical Junction Capacitance (Note 2)	$C_J$	7.0				pF			
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	35				$^\circ\text{C} / \text{W}$			
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

### NOTES:

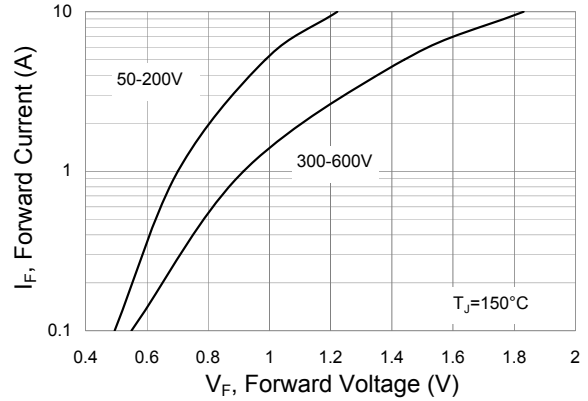
- 1.Reverse Recovery Tset Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
- 2.Measured at 1.0MHz and applied reverse voltage of 4.0 volts.
- 3.8.0mm<sup>2</sup>(.013mm thick) land areas.



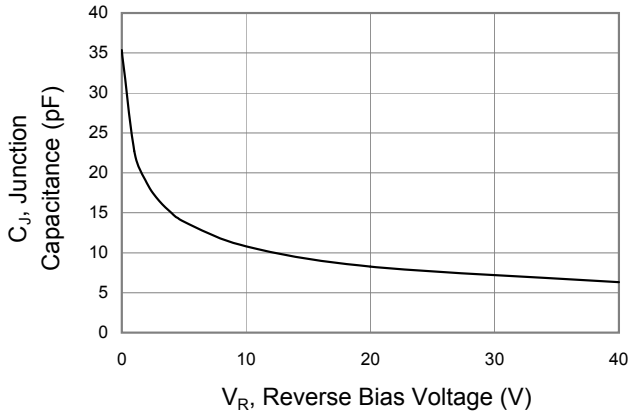
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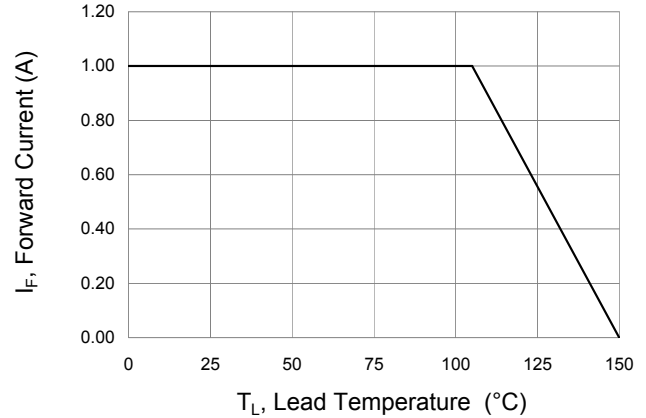
**Fig.1 Typical Forward Characteristics**



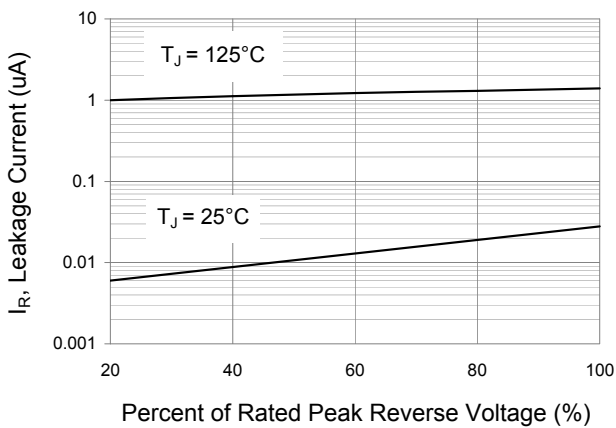
**Fig.2 Typical Forward Characteristics**



**Fig.3 Typical Junction Capacitance**



**Fig.4 Forward Current Derating Curve**

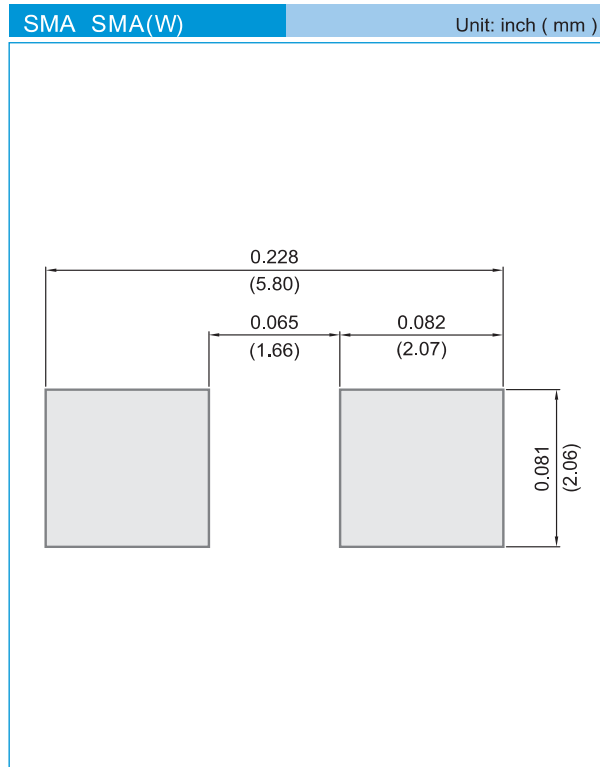


**Fig.5 Typical Reverse Characteristics**



# ES1AW SERIES

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8Kper 7" plastic Reel



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## Part No\_packing code\_Version

ES1AW\_R1\_00001

ES1AW\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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