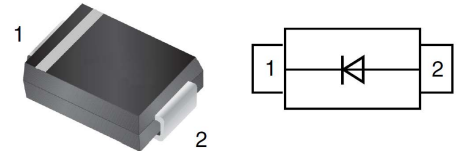


## Super Fast Surface Mount Rectifier in SMAF

### Features

- For surface mounted application
- Glass passivated junction chip
- Built-in strain relief
- ideal for automated placement
- Superfast recovery time for high efficiency



### Mechanical Data

- **Case:** JEDEC SMAF molded plastic  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

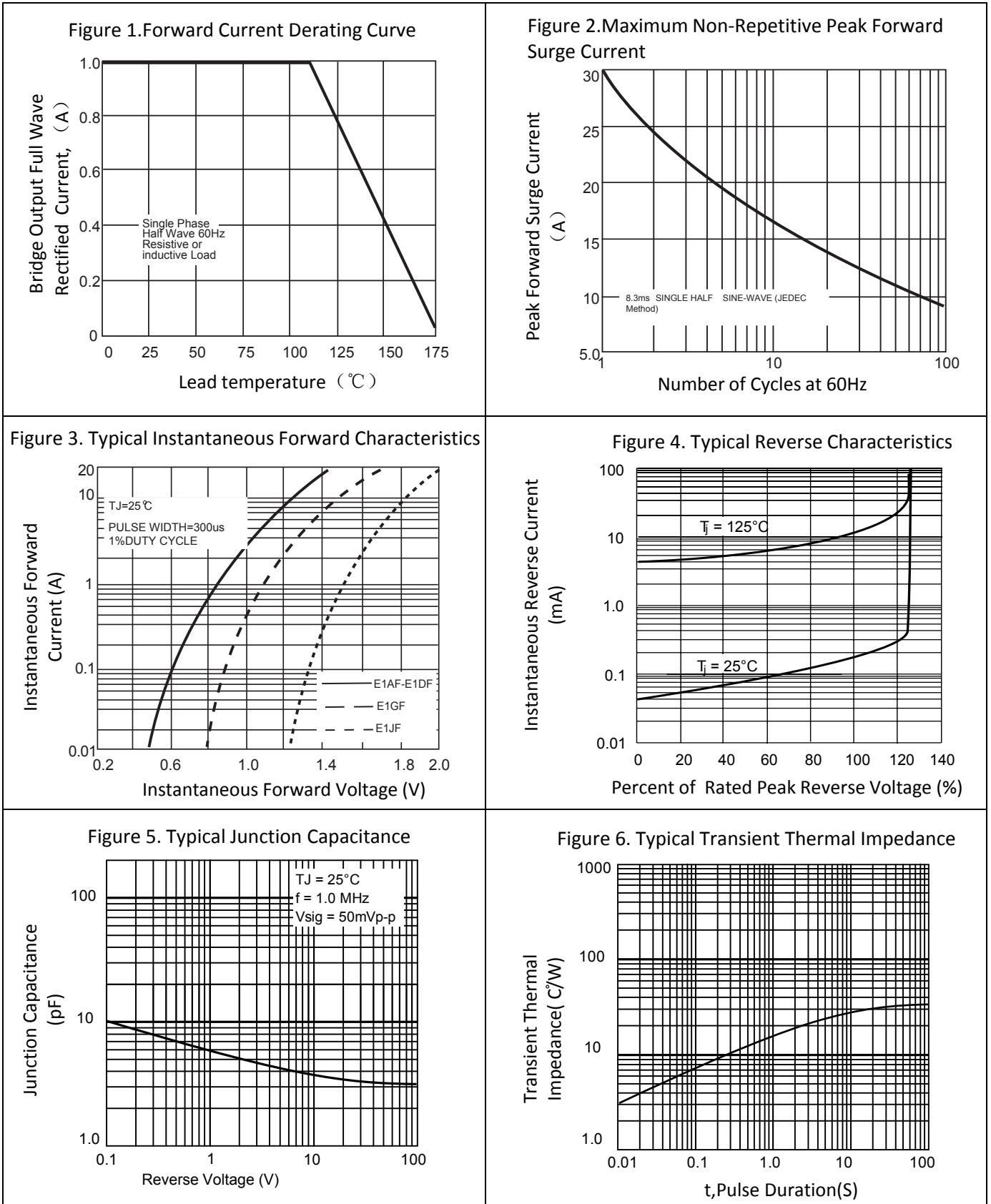
### Maximum Ratings And Electrical Characteristics

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

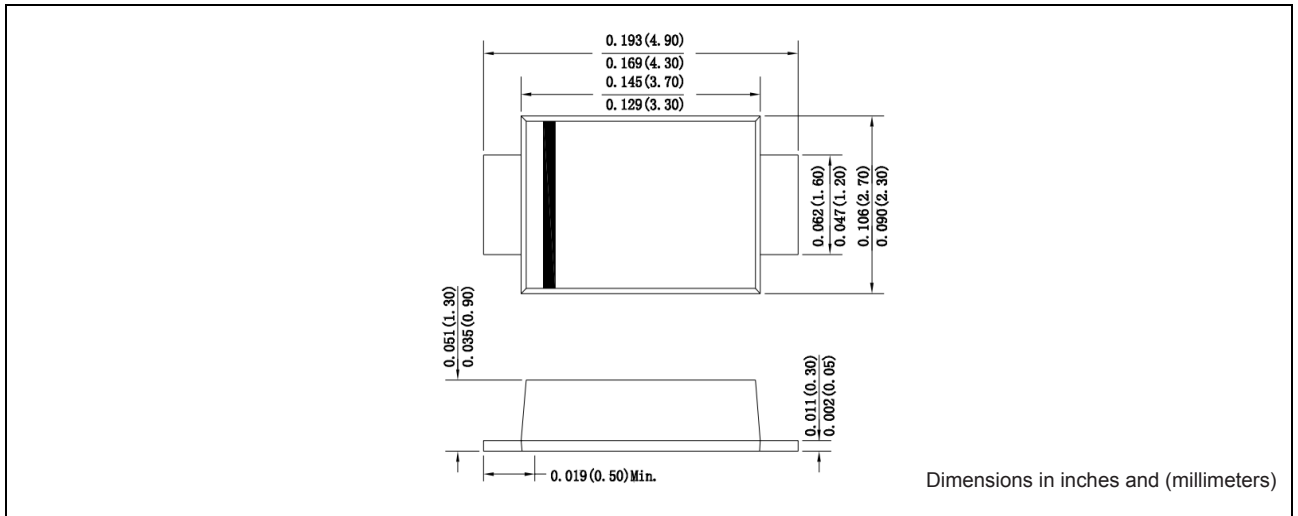
Parameter	Symbols	ES1AF	ES1BF	ES1DF	ES1GF	ES1JF	ES1KF	ES1MF	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current See Fig. 1 @ $T_L=90^{\circ}C$	$I_{(AV)}$	1.0							Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0							Amps
Maximum instantaneous forward voltage @ 1.0A	$V_F$	0.95			1.3		1.7		Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	@ $T_A=25^{\circ}C$			5.0		@ $T_A=125^{\circ}C$		$\mu A$
Maximum reverse recovery time (Note 1)	$t_r$	35							nS
Typical junction capacitance (Note 2)	$C_J$	10							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$				85.0		35.0		$^{\circ}C/W$
Operating temperature range	$T_J$	-55 to +150							$^{\circ}C$
Storage temperature range	$T_{STG}$	-55 to +150							$^{\circ}C$

- Notes:**
1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
  2. Measured at 1 MHz and Applied  $V_R=4.0$  Volts
  3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.2" x 0.2" ( 5.0 x 5.0 mm ) Copper Pad Areas

## Typical Characteristics (T<sub>amb</sub> = 25 °C unless otherwise specified)



### Package Dimensions



### Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
ES1AF thru ES1MF	DO-214AC/SMA	Tape and reel	5000pcs / reel	EIA STD RS-481

### Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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