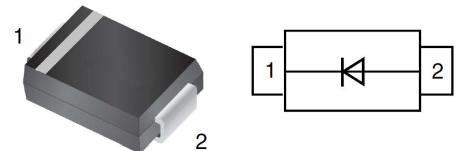


## Super Fast Surface Mount Rectifier in DO-214AA/SMB

### 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 DO-214AA(SMB)molded plastic  
Lead free; RoHS compliant; Halogen free
- **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	ES3AB	ES3BB	ES3DB	ES3GB	ES3JB	ES3KB	ES3MB	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 @ $T_c=90^{\circ}C$	$I_{(AV)}$	3.0							Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100.0							Amps
Maximum instantaneous forward voltage @ 1.0A	$V_F$	0.95			1.25		1.7		Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$				10.0 500				$\mu A$
Maximum reverse recovery time (Note 1)	$t_r$				35				nS
Typical junction capacitance (Note 2)	$C_J$				50				pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$				47.0 12.0				$^{\circ}C/W$
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** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)

Figure 1. Forward Current Derating Curve

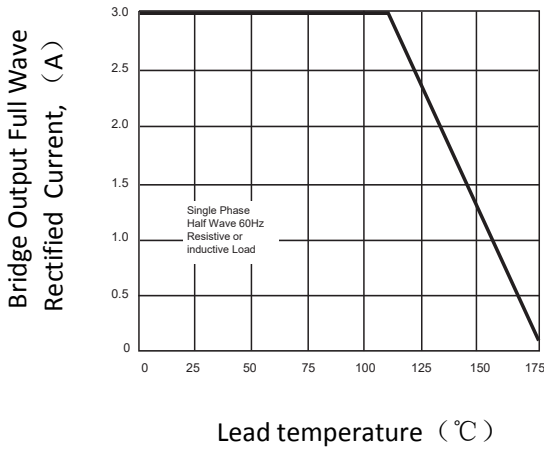


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

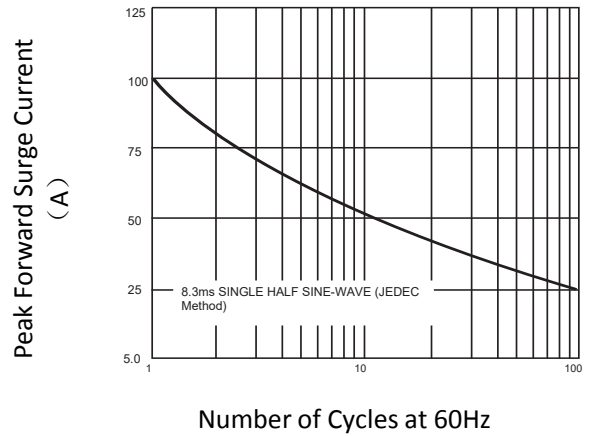


Figure 3. Typical Instantaneous Forward Characteristics

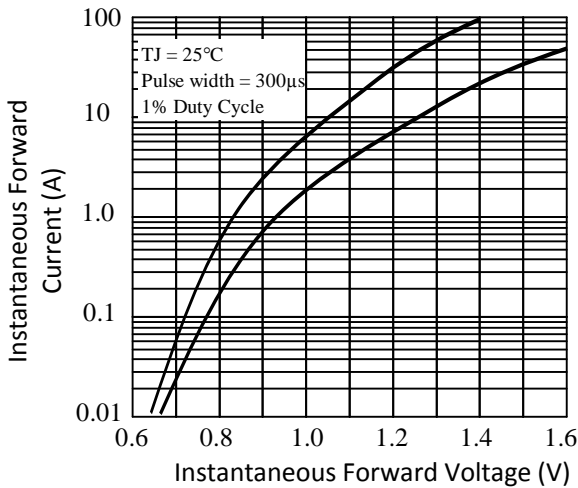


Figure 4. Typical Reverse Characteristics

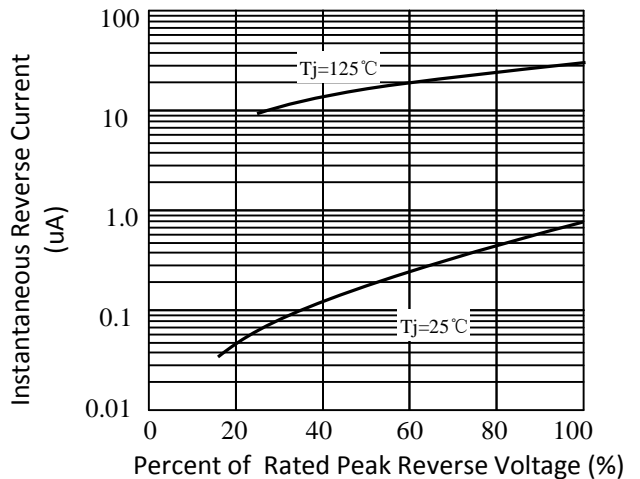


Figure 5. Typical Junction Capacitance

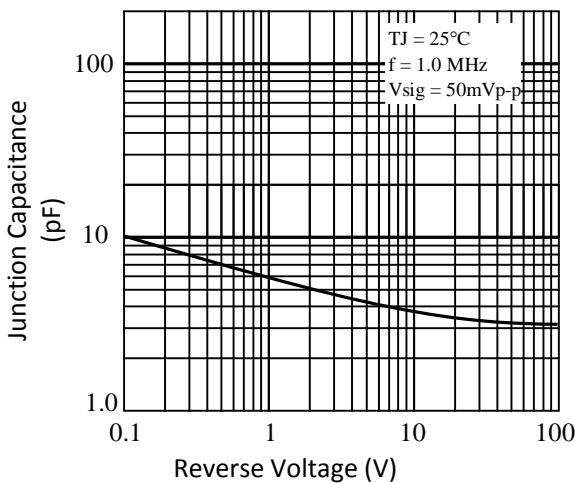
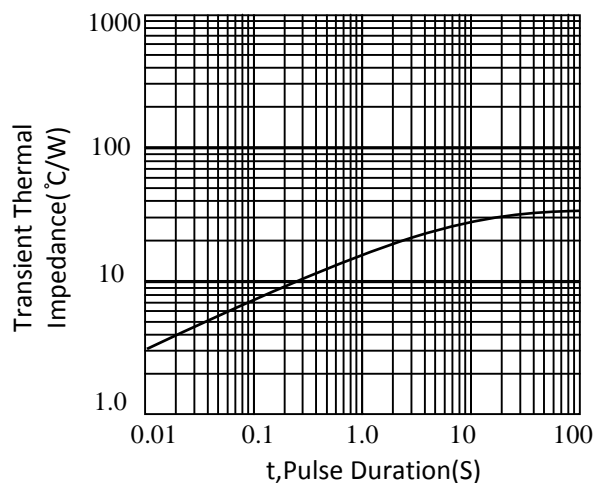
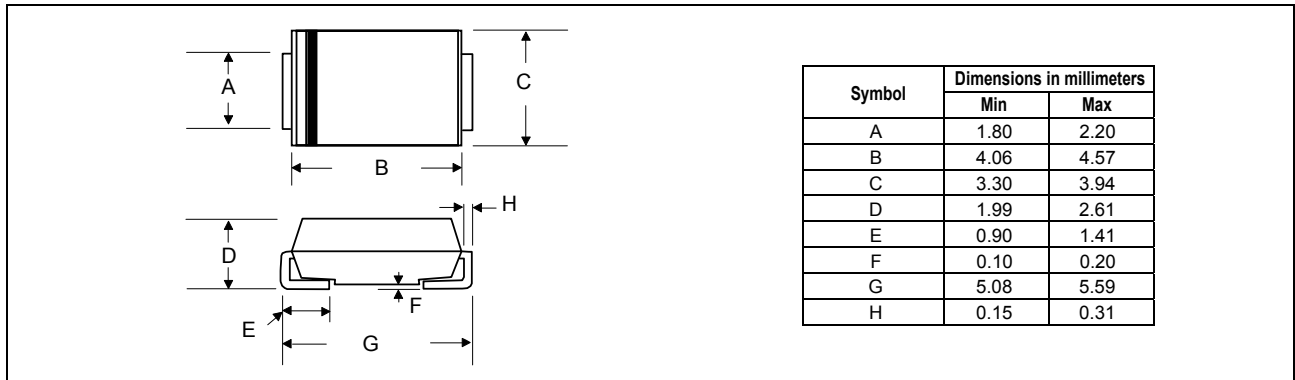


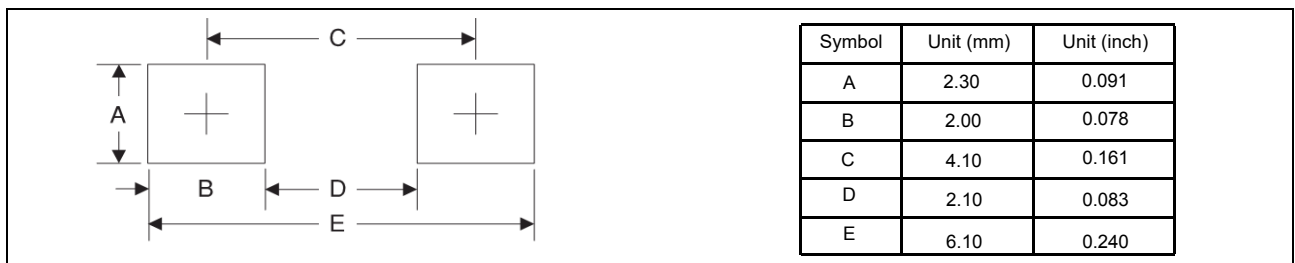
Figure 6. Typical Transient Thermal Impedance



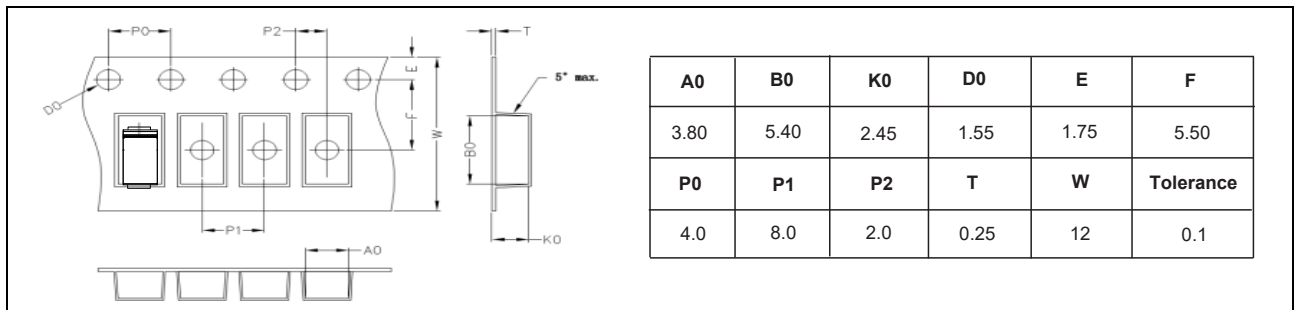
## Package Dimensions



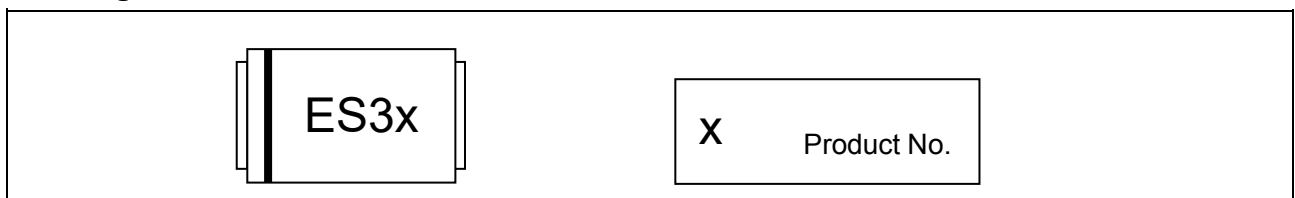
## PAD Dimensions



## Packing Information



## Marking



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
ES3AB thur ES3MB	DO-214AA/SMB	Tape and reel	3000pcs / reel	EIA STD RS-481

## Revision history

Date	Revision	Changes
23-May-2016	1.0	Initial release

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