



# THE DATASHEET OF ES2D



## 1.0A Surface Mount Super Fast Rectifier

### Features

- Low profile surface mounted package
- Glass passivated junction
- Ultra fast recovery time for high efficiency
- Plastic package has underwriters laboratory flammability classification 94V-0
- High temperature soldering: 250 °C /10 seconds at terminals
- RoHS compliant



**SMB**

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	ES2A	ES2B	ES2D	ES2F	ES2G	ES2J	ES2K	Unit	Conditions
<b>VRRM</b>	Maximum Repetitive Peak Reverse Voltage	50	100	200	300	400	600	800	V	
<b>VRMS</b>	Maximum RMS Voltage	35	70	140	210	280	420	560	V	
<b>VDC</b>	Maximum DC Blocking Voltage	50	100	200	300	400	600	800	V	
<b>IAV</b>	Maximum Average Forward Rectified Current	2.0							A	TL=110°C
<b>IFSM</b>	Peak Forward Surge Current	65					60		A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
<b>TJ,TSTG</b>	Operating Junction and Storage Temperature Range	-55 to 150							°C	

**Note:** Single phase half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

## Electrical Characteristics ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted)

Symbol	Description	ES2A	ES2B	ES2D	ES2F	ES2G	ES2J	ES2K	Unit	Conditions	
$V_F$	Maximum Instantaneous Forward Voltage	0.95			1.25		1.7	2.2	V	$I_F$ at 1.0 A	
$I_R$	Maximum DC Reverse Current at Rated DC Blocking Voltage	5								$\mu\text{A}$	$T_A = 25^{\circ}\text{C}$
		100									$T_A = 125^{\circ}\text{C}$
$t_{rr}$	Typical Reverse Recovery Time	35								nS	$I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{rr} = 0.25\text{A}$
$C_J$	Typical Junction Capacitance	25								pf	Measured at 1.0 MHz and Applied $V_r = 4.0$ volts.
$R_{\theta-JA}$	Maximum Thermal Resistance	20								$^{\circ}\text{C/W}$	Mounted on 0.2" x 0.2" (5mmx5mm) copper pad area

**Note:** Single phase half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

## Typical Characteristics Curves

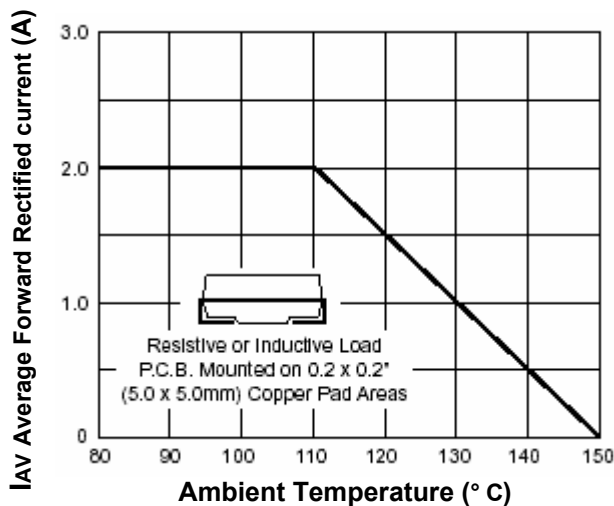


Fig.1- Forward Current Derating Curve

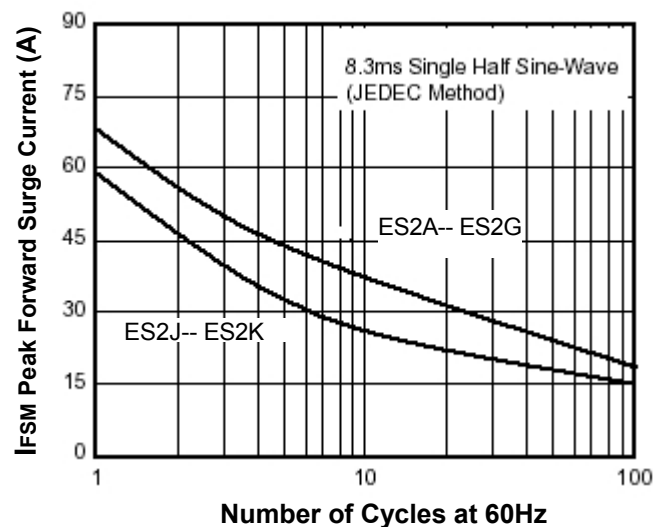


Fig.2- Max. Non-Repetitive Forward Surge Current

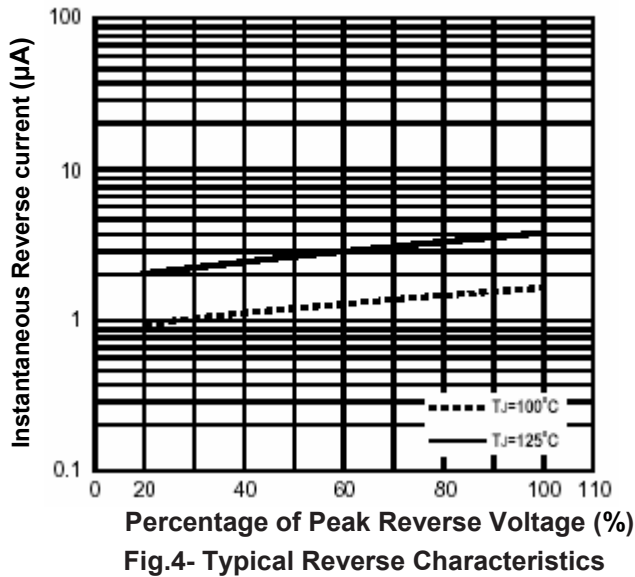


Fig.4- Typical Reverse Characteristics

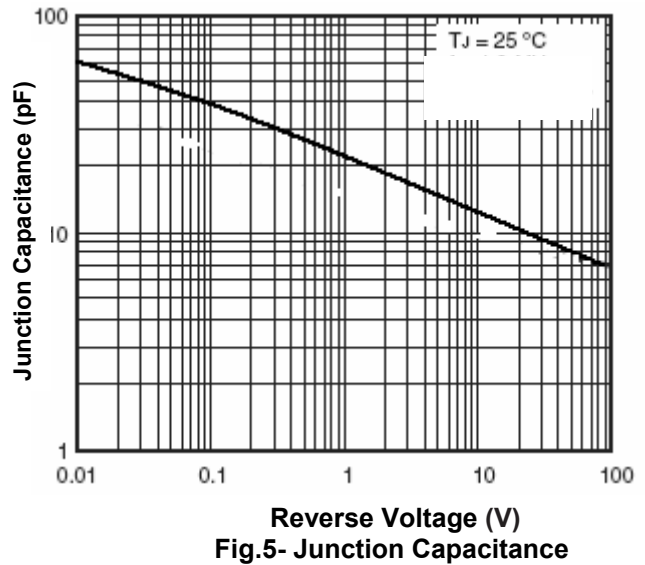
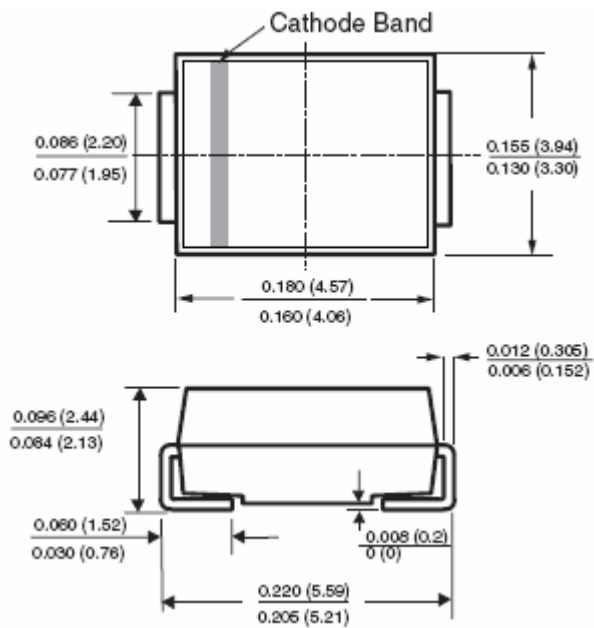
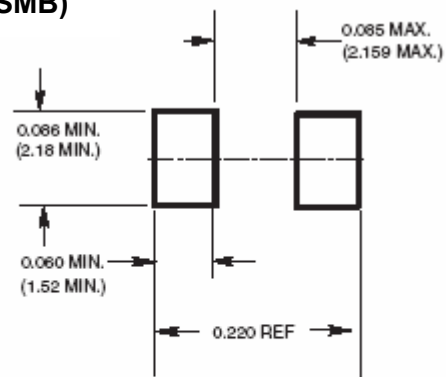


Fig.5- Junction Capacitance

**Dimensions in inch (mm)**





**DO214AA (SMB)**



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