



# ES2A THRU ES2K

## SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 50 to 800 VOLTS  
**FORWARD CURRENT:** 2.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass Passivated Die Construction
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Superfast recovery times for high efficiency
- Suffix "H" indicates Halogen-free parts, ex. ES2AH

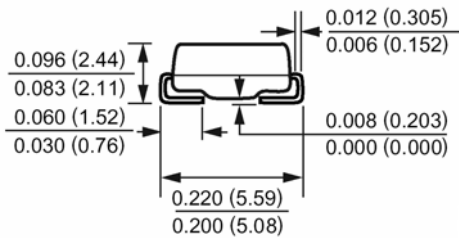
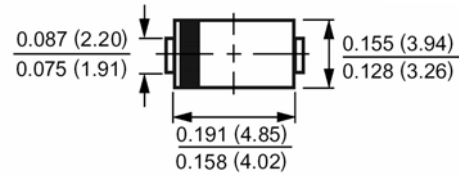
### MECHANICAL DATA

Case : Molded plastic, DO-214AA(SMB)

Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity : Color band denotes cathode end

DO214-AA(SMB)



Dimensions in inches and (millimeters)

### 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, derate current by 20%.

Parameter	Symbols	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	ES2K	Units	
Maximum Recerrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	800	Volts	
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	560		
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	800		
Maximum Average Forward Rectified Current	$I_{(AV)}$	2.0								Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50								Amp	
Maximum Forward Voltage at 2.0A	$V_F$	0.95			1.25		1.70	2.20		Volts	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	$I_R$	5.0				150					uAmp
Typical Junction Capacitance (Note 1)	$C_J$	25									pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	20									°C/W
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	35									nS
Operating Junction Temperature Range	$T_J$	-65 to +150									°C
Storage Temperature Range	$T_{stg}$	-65 to +150									

#### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions:  $I_F=5A$ ,  $I_R=1A$ ,  $I_{RR}=25A$ .



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## SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES

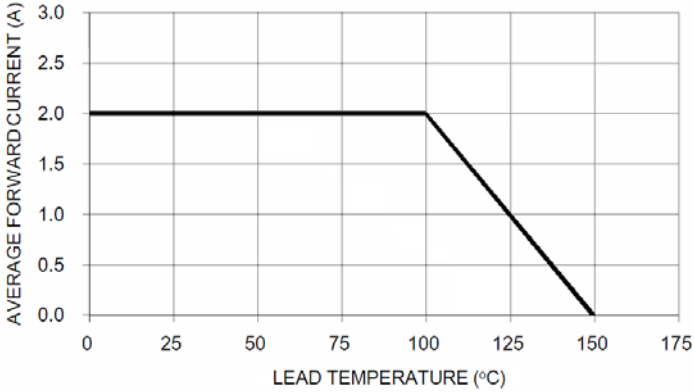


FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

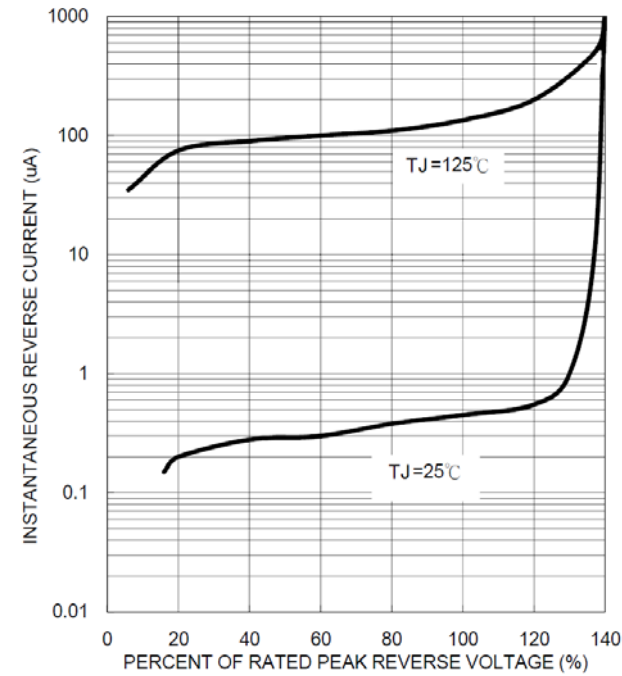


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

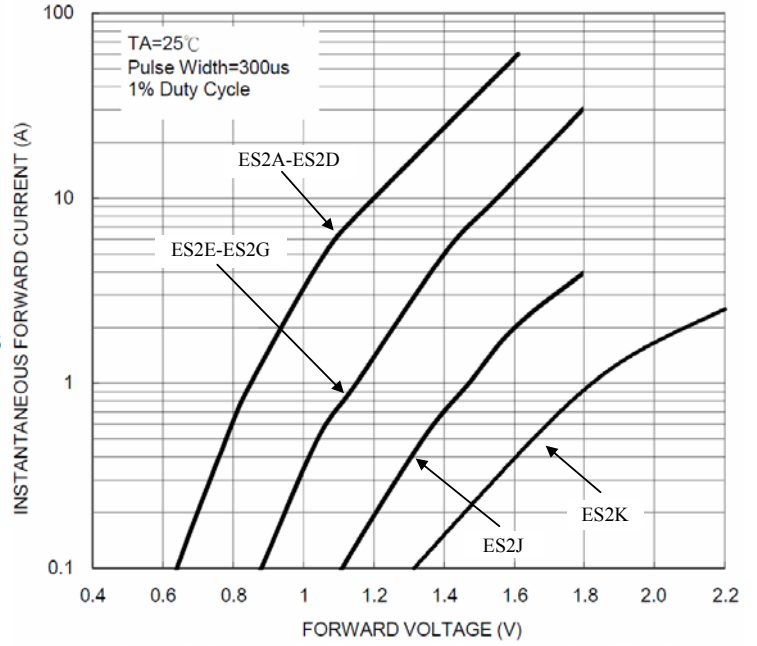


FIG. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

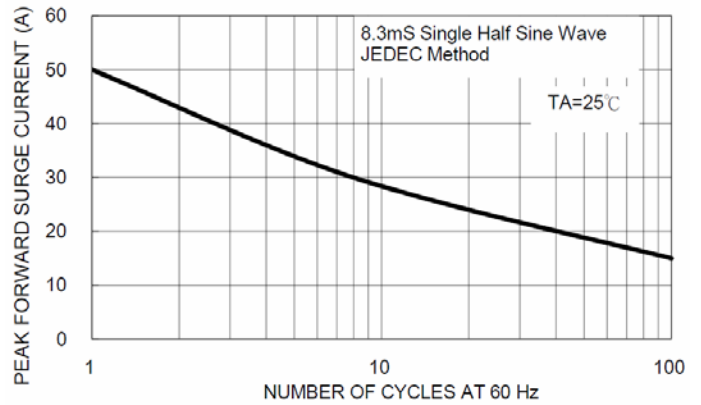


FIG. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT