



# ES2A THRU ES2K

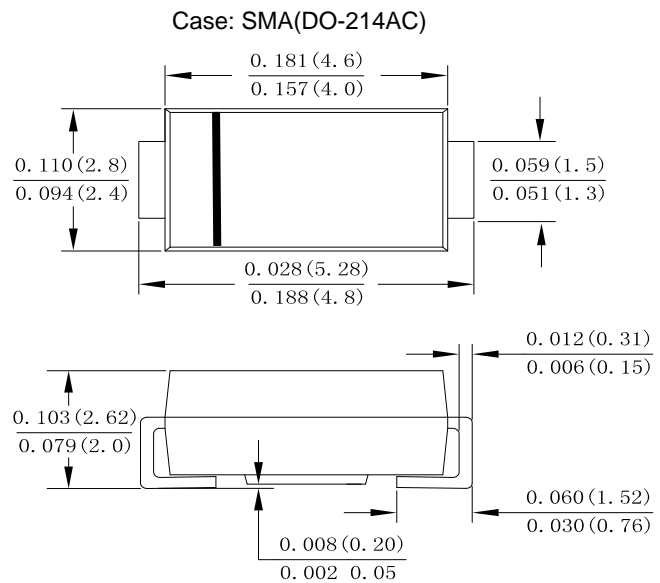
2.0AMP Surface Mount Glass Superfast Recovery Rectifier

## Features

- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-0

## Mechanical Data

- Case: Molded plastic SMA
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

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

Type Number	SYMBOL	ES2A	ES2B	ES2D	ES2G	ES2J	ES2K	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	V
Average Rectified Output Current @ $T_L = 100^\circ C$	$I_{F(AV)}$	2.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	60						A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	48						A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 25^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	120						A
10000 times of the wave surge current (time width 1ms, time interval 3s)	$I_{FSM}$	96						A
Rating for fusing ( $t < 8.3ms$ )	$I^2 t$	45						A
Forward Voltage @ $I_F = 2.0A$	$V_{FM}$	0.95			1.3	1.7	1.9	V
Peak Reverse Current @ $T_A = 25^\circ C$	$I_R$	5.0						uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		200						
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	35						ns
Typical Junction Capacitance (Note 2)	$C_J$	10						pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	120						$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ C$

- Note:
1. Reverse Recovery Test Conditions:  $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$ .
  2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
  3. Device mounted on FR-4 substrate, 1" x 1", 2oz, single-sided, PC boards with 0.1" x 0.15" copper pad.



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## 2.0AMP Surface Mount Glass Superfast Recovery Rectifier

FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

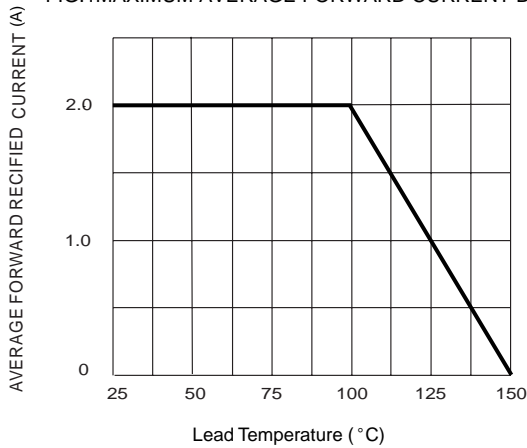


FIG.2 TYPICAL FORWARD CHARACTERISTICS

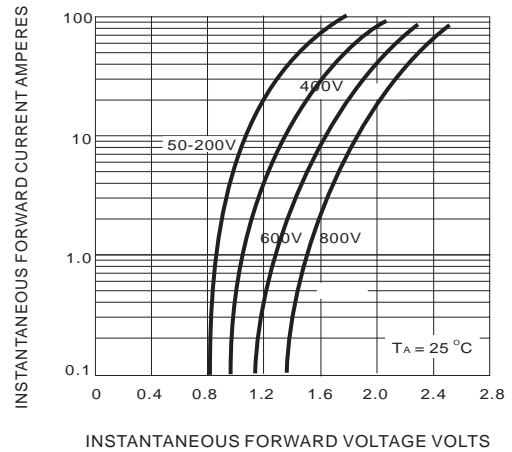


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

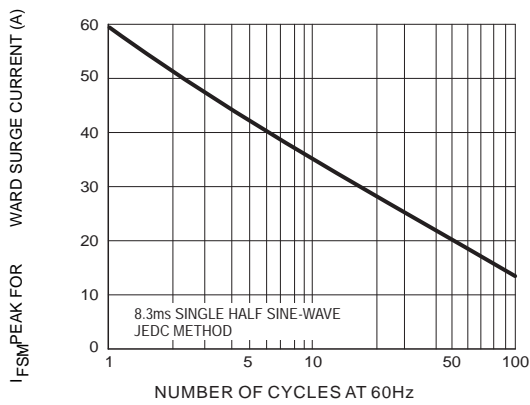


FIG.4 TYPICAL JUNCTION CAPACITANCE

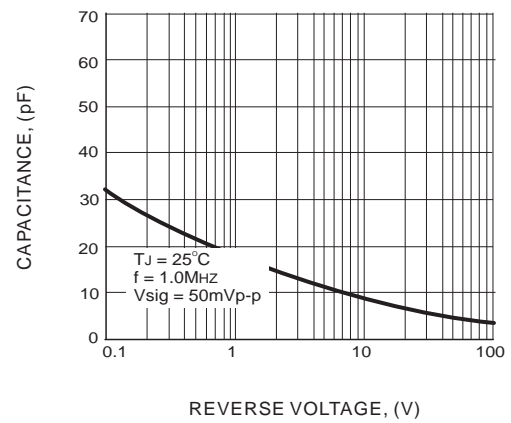
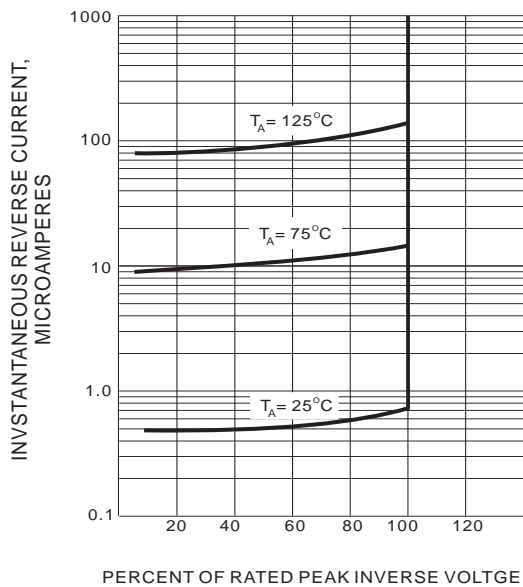
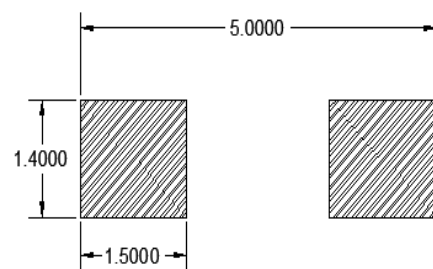


FIG.5 TYPICAL REVERSE CHARACTERISTICS



SMA PAD LAYOUT





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