

### ES1A THRU ES1M

SURFACE MOUNTED SUPER FAST RECTIFIER

VOLTAGE: 50 TO 1000V CURRENT: 1.0A

#### Features

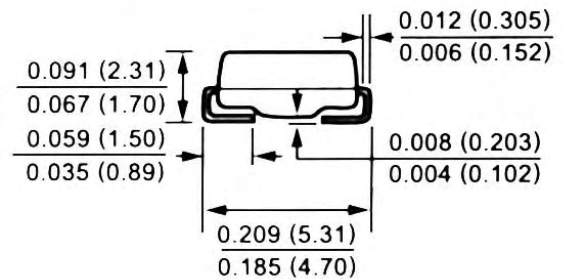
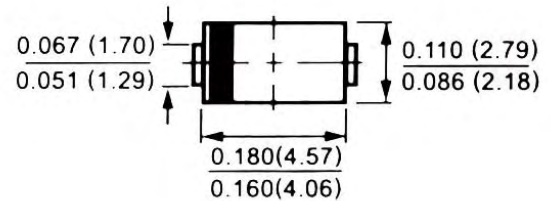
- ◆ Glass passivated junction chip
- ◆ For surface mounted application
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ High surge capability
- ◆ High temperature soldering guaranteed  
250°C/10sec/at terminal/complete device
- ◆ Superfast recovery time for high efficiency

#### Mechanical data

- ◆ Cases: Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
- ◆ Terminals: Plated axial leads solderable MIL-STD 202E, method 208C
- ◆ Polarity: Color band denote cathode end
- ◆ Weight: 0.002 ounce, 0.064 gram



SMA/DO-214AC



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	ES1A	ES1B	ES1D	ES1G	ES1J	ES1K	ES1M	Units
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	550	700	V
Maximum DC blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 3/8" lead length at $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage at rated forward current	$V_F$	0.95				1.3	1.7		V
Maximum DC reverse current $T_a=25^\circ\text{C}$ At rated DC blocking voltage $T_a=125^\circ\text{C}$	$I_R$	10.0				100.00			$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time	$T_{rr}$	35				nS			
Typical junction capacitance	$C_J$	20.0				pF			
Typical thermal resistance	$R_{JA}$	60.0				$^\circ\text{C}/\text{W}$			
Storage and operating junction temperature	$T_{STG}$	-50 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1.0MHz and applied voltage of 4.0Vdc

2. Thermal resistance from junction to terminal mounted on 5×5mm copper pad area

3. Reverse recovery condition  $I_f=1.0\text{A}, I_{rr}=0.25\text{A}$