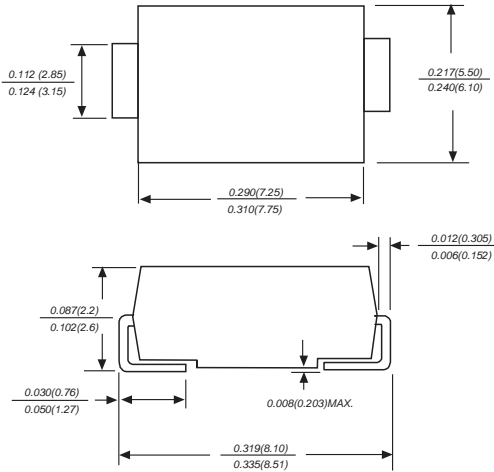


ES3A THRU ES3J

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 3.0 Amperes

SMC
DO-214AB


Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Super fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.008 ounce, 0.217 grams

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%.

	SYMBOLS	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	VOLTS	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	VOLTS	
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	VOLTS	
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	3.0							Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							Amps	
Maximum instantaneous forward voltage at 3.0A	V_F	0.95				1.25		1.7	Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0				50.0				μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35							ns	
Typical junction capacitance (NOTE 2)	C_J	130.0							pF	
Typical thermal resistance (NOTE 3)	R_{qJA}	40.0							$^\circ\text{C}/\text{W}$	
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							$^\circ\text{C}$	

Note: 1. Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. P.C.B. mounted with 0.6x0.6" (16x16mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES ES3A THRU ES3J

