

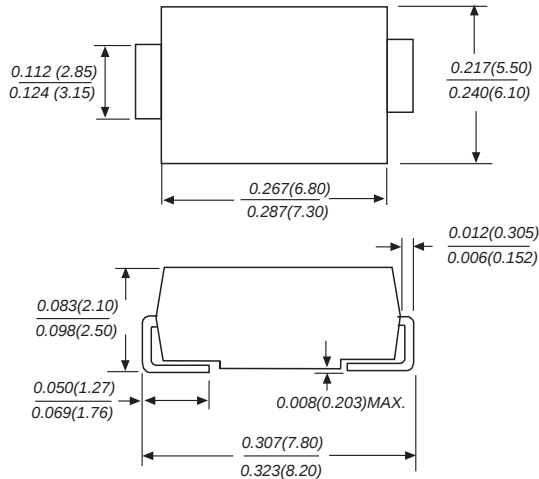
ES3A THRU ES3J

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

- ◇ Glass passivated junction chip
- ◇ For surface mounted applications
- ◇ Low profile package
- ◇ Built-in strain relief
- ◇ Ideal for automated placement
- ◇ Easy pick and place
- ◇ Superfast recovery time for high efficiency
- ◇ Glass passivated chip junction
- ◇ High temperature soldering: 260°C/10 seconds at terminals
- ◇ Plastic material used carries Underwriters Laboratory Classification 94V-O

Mechanical Data

- ◇ Cases: Molded plastic
- ◇ Terminals: Solder plated
- ◇ Polarity: Indicated by cathode band
- ◇ Packaging: 16mm tape per EIA STD RS-481
- ◇ Weight: 0.22 gram

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	ES 3A	ES 3B	ES 3C	ES 3D	ES 3F	ES 3G	ES 3H	ES 3J	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current See Fig. 1	I _(AV)	3.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) @T _L = 100°C	I _{FSM}	100								A
Maximum Instantaneous Forward Voltage @ 3.0A	V _F	0.95				1.3		1.7		V
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =100°C	I _R	10 250								uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35								nS
Typical Junction Capacitance (Note 2)	C _j	45				30				pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJL}	47 12								°C/W
Operating Temperature Range	T _J	-55 to +150								°C
Storage Temperature Range	T _{STG}	-55 to + 150								°C

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied $V_R=4.0$ Volts

3. Units Mounted on P.C.B. with 0.6 x 0.6"(16 x 16mm) Copper Pad Areas

RATINGS AND CHARACTERISTIC CURVES (ES3A THRU ES3J)

