

ES3A THRU ES3J Series

Features

- Glass passivated chip junctions
- Ideal for automated placement
- Ultrafast reverse recovery time for high efficiency
- Low profile package
- High forward surge capability
- High temperature soldering:
 260 ℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC



- Case: JEDEC DO-214AB molded plastic body over glass passivated chip
- Terminals: Solder plated, solderable per JESD22-B102
- Polarity: Laser band denotes cathode end





SMC (DO - 214AB)

Major Ratings and Characteristics

<u> </u>	
I _{F(AV)}	3.0 A
V_{RRM}	50 V to 600 V
I _{FSM}	100 A
t _{rr}	35 nS
V_{F}	0.95 V, 1.25 V, 1.7 V
T _j max.	150 °C

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

(1.A 25 5 dimester interval									
Items	Symbol	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	I _{F(AV)}	3				Α			
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100					Α		
Thermal resistance from junction to lead ⁽¹⁾	R _{eJL}	20				°C/W			
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150				$^{\circ}\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$			

Note 1: Mounted on P.C.B. with 0.32 x 0.32" (8.0 x 8.0mm) copper pad areas.

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Electrical Characteristics (A = 5 amost amount of the control of t										
Items	Test co	onditions	Symbol	ES3A~D ES3E~G ES3J						
Maximum Instantaneous forward voltage	I _F =	3A ⁽²⁾	V_{F}	0.95 1.25 1.70						
Maximum reverse current	V _R =V _{DC}	T _j =25℃	I_	5 50						
iviaximum reverse current	V _R -V _{DC}	T _j =125℃	I _R							
Reverse recovery time		I _F =0.5A I _R =1A I _{rr} =0.25A		35			nS			
Typical junction capacitance	4.0 V	,1MHz	CJ		45	0	pF			

Note 2: Pulse test:300µs pulse width,1% duty cycle.

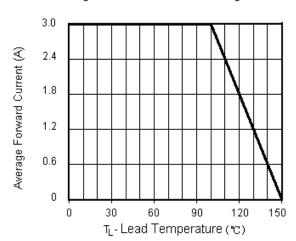


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Fig.2 Maximum Non-Repetitive Peak

(T_A=25 °C unless otherwise noted) **Characteristic Curves**

Fig.1 Forward Current Derating Curve



Forward Surge Current 100 Peak Forward Surge Current (A) 80 60 40

20

0

Number of Cycles at 60 Hz

10

Fig.3 Typical Instantaneous Forward Characteristics

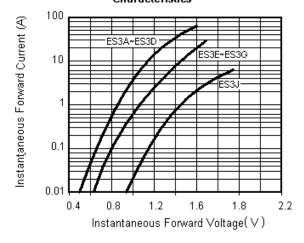
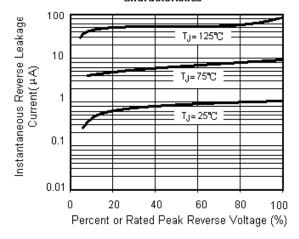
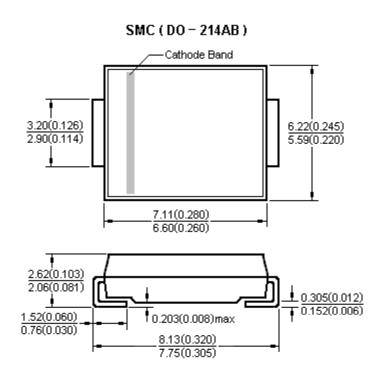


Fig.4 Typical Reverse Leakage Characteristics





Package Outline



Dimensions in millimeters and (inches)

Symbol	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J
MARKING	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J

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