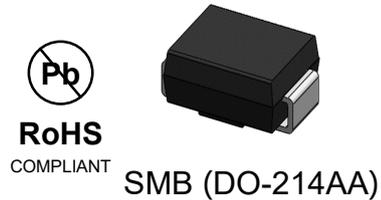


3A,600V Superfast Rectifier

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



Applications

For use in secondary rectification and freewheeling for superfast switching speeds of converters in consumer applications.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	ES3UJB	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Maximum RMS voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current	I _{F(AV)}	3	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	80	A
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{thJA}	85	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	20	°C /W

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)				
Parameter	Symbol	Test Conditions	ES3UJB	Unit
Maximum forward drop voltage	V_F	$I_F=3\text{A}$	1.5	V
Maximum reverse leakage current @ V_R	I_R	$T_J = 25^{\circ}\text{C}$	5	μA
Typical junction capacitance	C_J	$V_R=4.0\text{V}$, $f=1\text{MHz}$	66	pF
Maximum reverse recovery time	t_{rr}	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$	35	ns

Note:

1. Mounted on copper pad area of 5 x 5mm to each terminal.

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

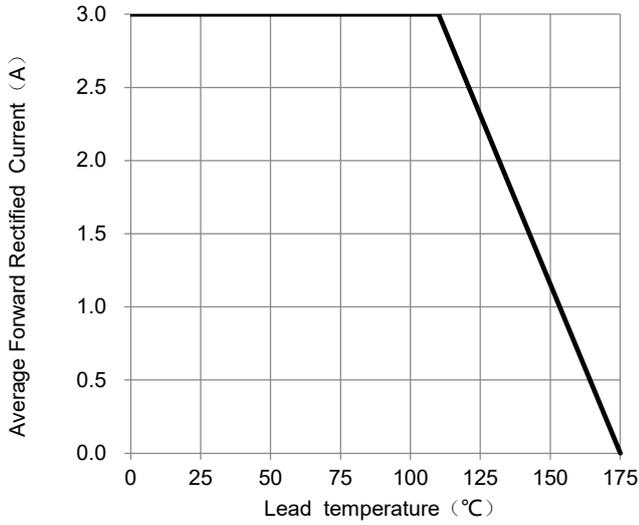


Fig.1 –Forward Current Derating Curve

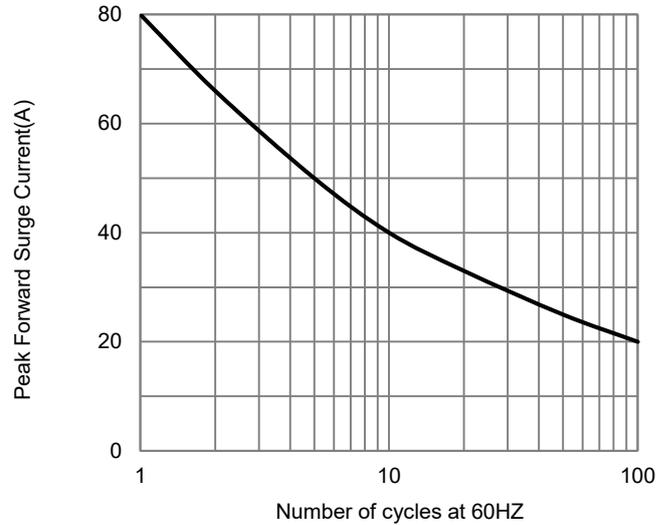


Fig.2 – Maximum Non-Repetitive Surge Current

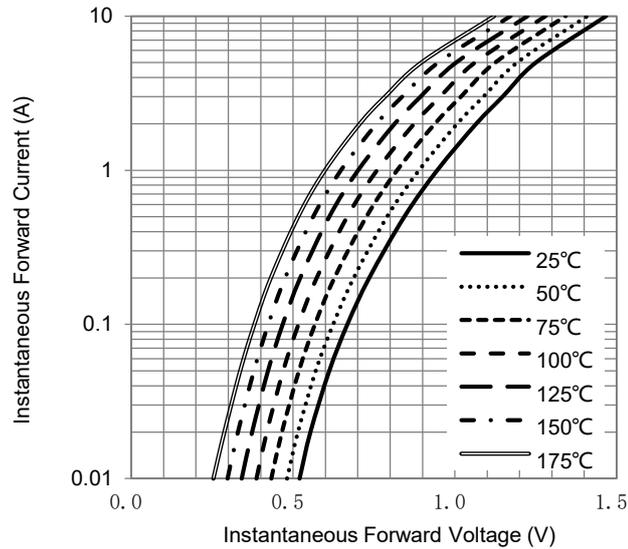


Fig.3 –Typical Forward Voltage Characteristics

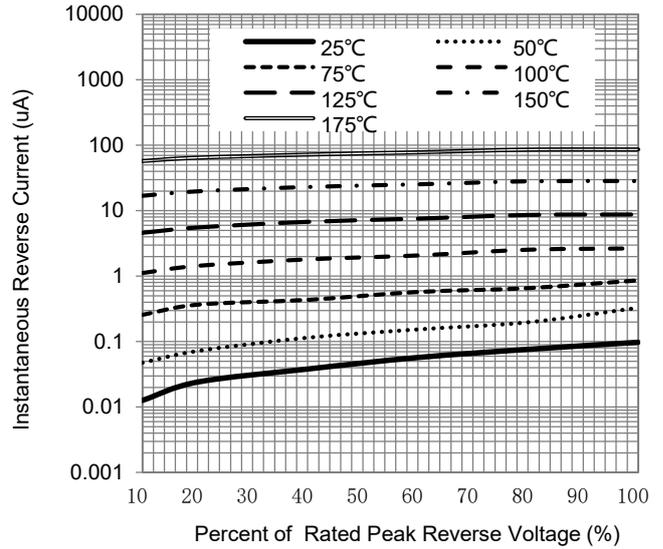


Fig.4 –Typical Reverse Current Characteristics

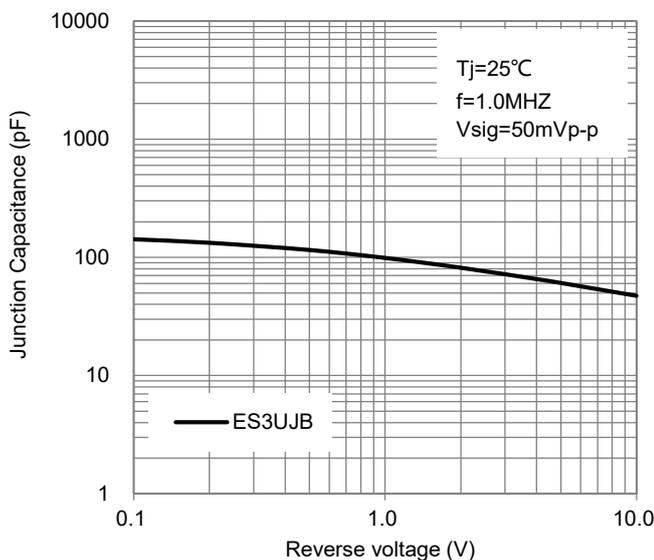
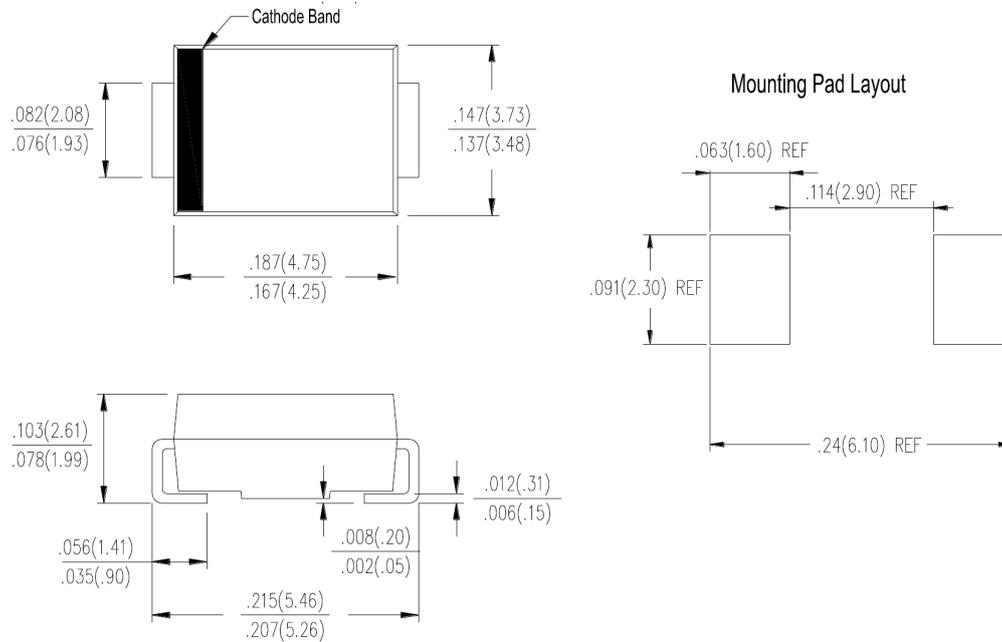


Fig.5 –Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



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