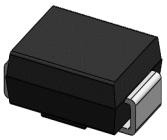
3A,50-600V Superfast Rectifiers

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℃/10 seconds

Pb
RoHS
COMPLIANT



SMB (DO-214AA)

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	ES3AB	ES3BB	ES3CB	ES3DB	ES3FB	ES3GB	ES3JB	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							A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°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°C unless otherwise noted)

Parameter	Symbol	Test Conditions	ES3AB	ES3BB	ES3CB	ES3DB	ES3FB	ES3GB	ES3JB	Unit
Maximum forward drop voltage	V_F	I_F=3A	0.95				1.30		1.70	V
Maximum reverse leakage current @V_R	I_R	T_J =25°C	10							uA
		T_J =125°C	500							
Typical junction capacitance	C_J	V_R=4.0V, f=1MHZ	45							pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	35							ns

Note：

1.Mounted on copper pad area of 0.2x0.2” (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves (T$_A$=25°C unless otherwise noted)

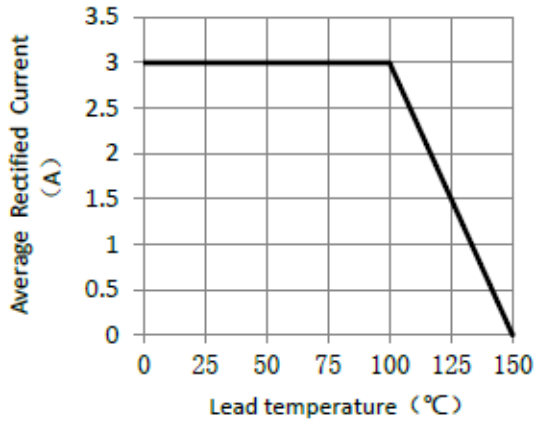


Figure 1.Forward Current Derating Curve

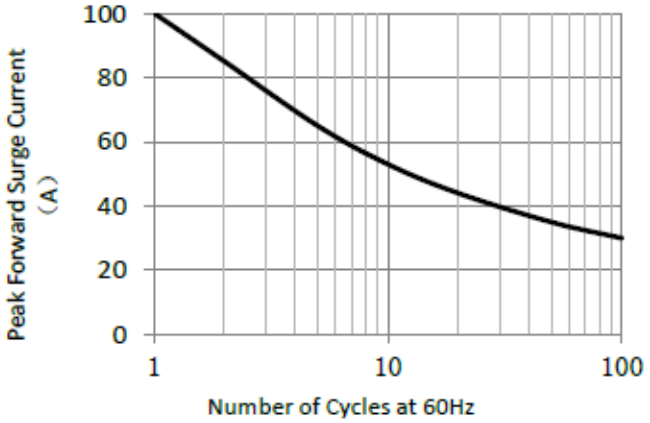


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

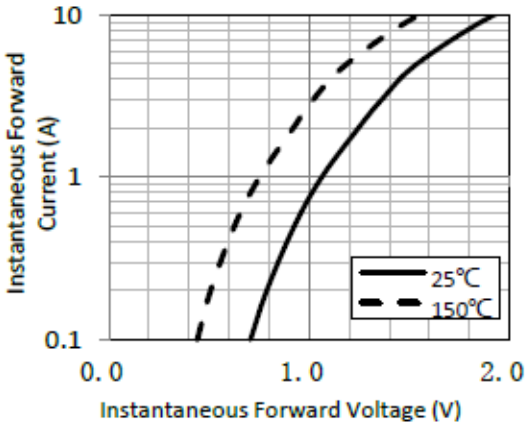


Figure 3. Typical Instantaneous Forward Characteristics(ES3JB)

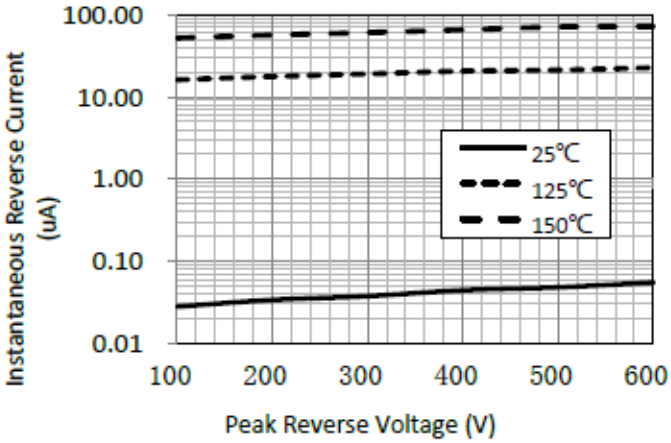
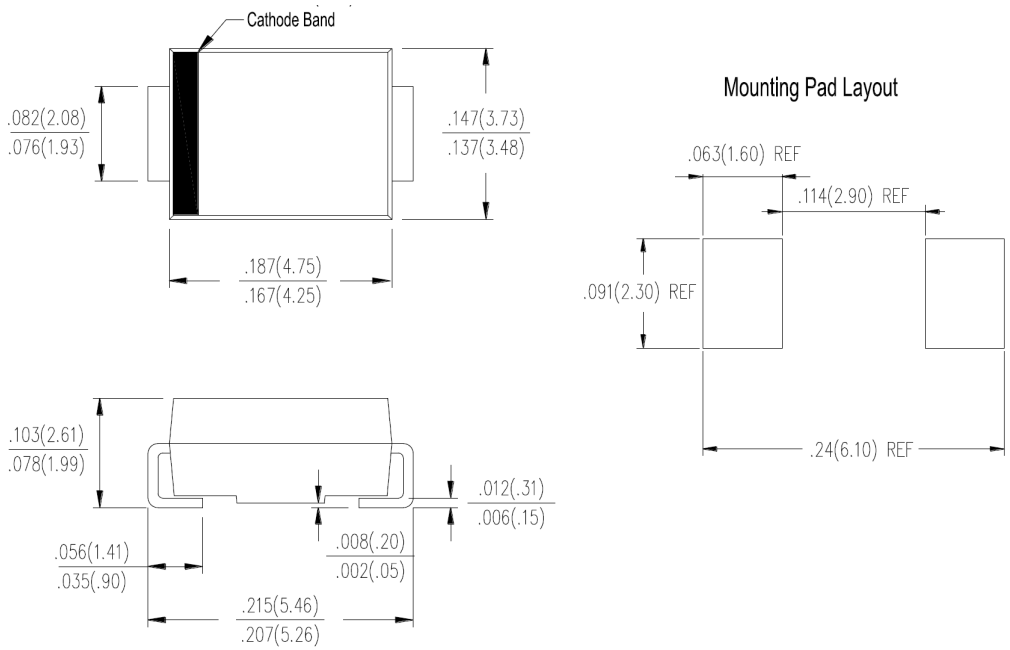


Figure 4. Typical Reverse Characteristics (ES3JB)

Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



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