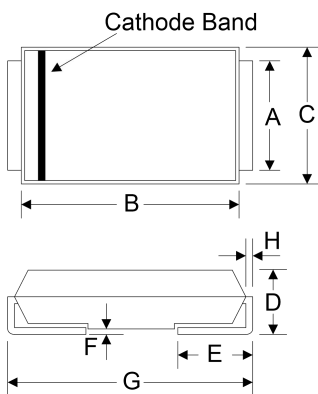


Features

- ◆ Glass Passivated Die Construction
- ◆ Low Forward Voltage Drop
- ◆ High Current Capability
- ◆ Surge Overload Rating to 90A Peak
- ◆ For surface mounted applications to optimize board space
- ◆ Meets MSL level 1, per J-STD-020
- ◆ Meet Halogen free and RoHS compliant
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ High temperature soldering guaranteed: 260°C/30 seconds at terminals
- ◆ Polarity: Cathode Band or Cathode Notch



Dimensions (SMB/DO-214AA)



Ref.	Millimeters		Inches	
	Min	Max	Min.	Max.
A	1.850	2.200	0.072	0.086
B	4.060	4.650	0.160	0.183
C	3.300	3.940	0.130	0.155
D	2.050	2.440	0.080	0.096
E	0.760	1.520	0.030	0.060
F	-	0.203	-	0.008
G	5.050	5.590	0.198	0.220
H	0.152	0.305	0.006	0.012
I	2.260	-	0.089	-
J	2.160	-	0.085	-
K	-	2.740	-	0.107

Maximum Ratings and Electrical Characteristics($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	Unit
Maximum Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Reverse Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I _{F(AV)}	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	90							A
Maximum Forward Voltage@3.0A	V _F	1.1							V
Peak Reverse Current at Rated DC Blocking Voltage	I _{R@25°C}	5 100							μA
	I _{R@125°C}								
Typical Total Capacitance(Note 1)	C _T	35							pF
Typical Thermal Resistance, Junction to Terminal (Note 2)	R _{θJA}	48							°C/W
	R _{θJC}	16							
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Notes:

- 1.Measured at 1 MHz and applied reverse voltage of 4 V D.C
- 2.P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1. Forward Current Derating Curve

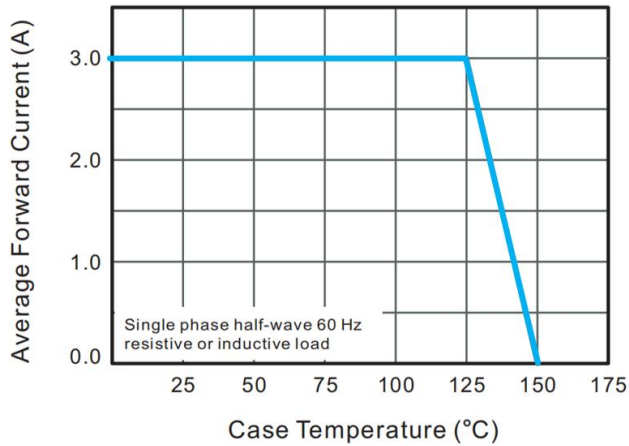


Figure 2. Typical Forward Characteristics

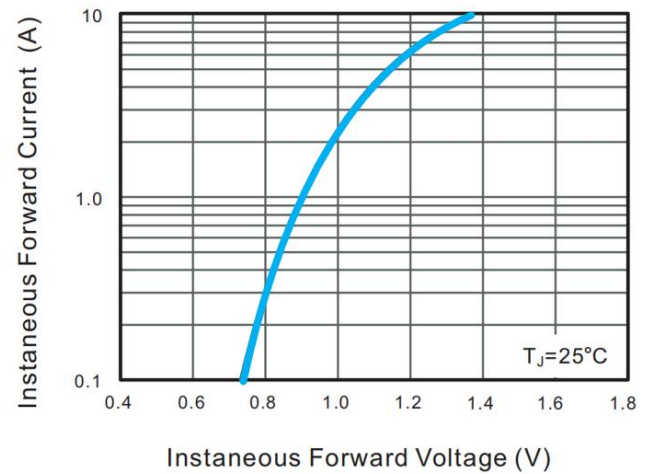


Figure 3. Forward Surge Current Derating Curve

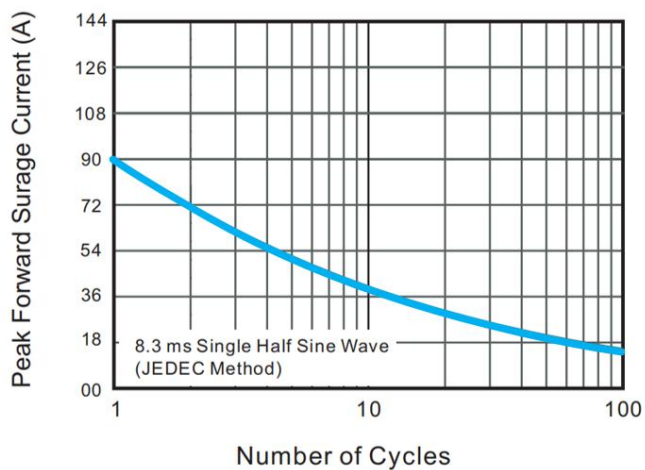
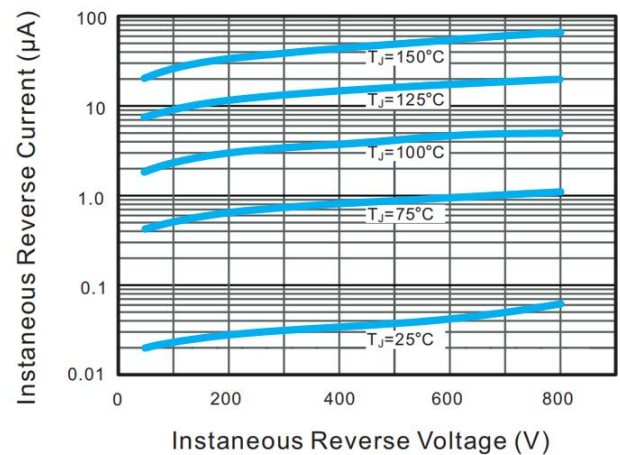
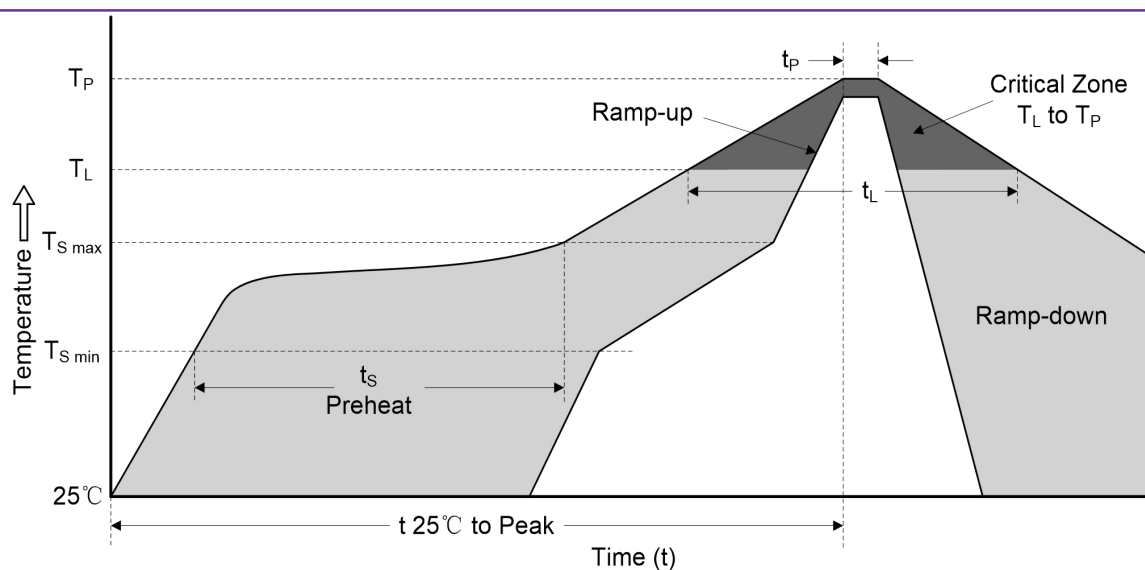


Figure 4. Typical Reverse Characteristics



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Preheat	-Temperature Min ($T_{S\ min}$)	150°C
	-Temperature Max ($T_{S\ max}$)	200°C
	-Time (min to max) (t_s)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°C
Time within 5°C of actual Peak Temperature (t_P)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260°C