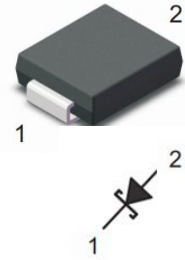


Features

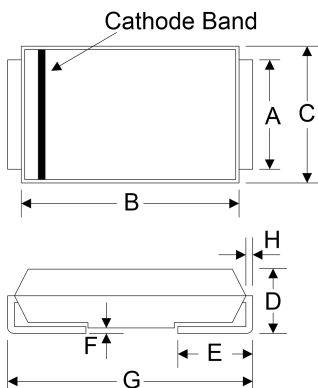
- ◆ Glass Passivated Die Construction
- ◆ Low Forward Voltage Drop
- ◆ High Current Capability
- ◆ Surge Overload Rating to 120A Peak
- ◆ For surface mounted applications to optimize board space
- ◆ Meets MSL level 1, per J-STD-020
- ◆ Meet Halogen free and RoHS compliant
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ High temperature soldering guaranteed: 260°C/30 seconds at terminals
- ◆ Polarity: Cathode Band or Cathode Notch



Application

- ◆ AC adapter
- ◆ The Power supply of Motor
- ◆ Variable-frequency power supply
- ◆ Amplifying Circuit

Dimensions (DO-214AB/SMC)



Ref.	Millimeters		Inches	
	Min	Max	Min.	Max.
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.06	2.62	0.079	0.103
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	7.75	8.130	0.305	0.320
H	0.152	0.305	0.006	0.012
I	3.30	-	0.129	-
J	2.40	-	0.094	-
K	-	4.20	-	0.165

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Item	Symbol	RS5AC	RS5BC	RS5DC	RS5GC	RS5JC	RS5KC	RS5MC	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Maximum Average Forward Rectified Current	I _O	5.0							A
Maximum Forward Voltage@5.0A	V _F	1.3							V
Peak Reverse Current at Rated DC Blocking Voltage	I _{R@25°C}	5 100							μA
	I _{R@125°C}								
Typical Total Capacitance at V _R =4V,f=1MHz	C _T	50							pF
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	120							A
Maximum Reverse Recovery Time(Note1)	trr	150				250	500		ns
Typical Thermal Resistance (Note2)	R _{θJA}	35							°C/W
	R _{θJC}	13							
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Notes:

1. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.
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

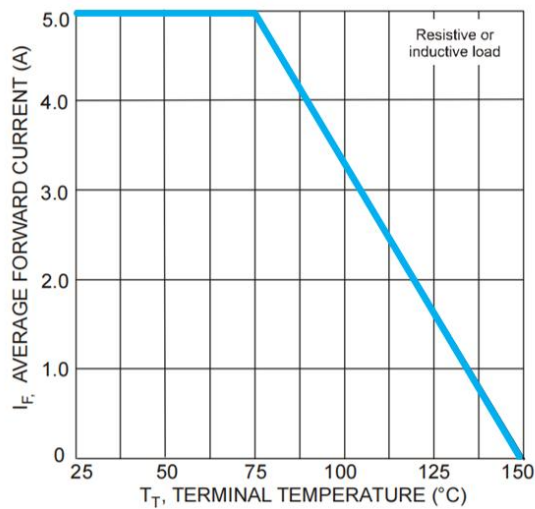


Figure 2. Typical Reverse Characteristics

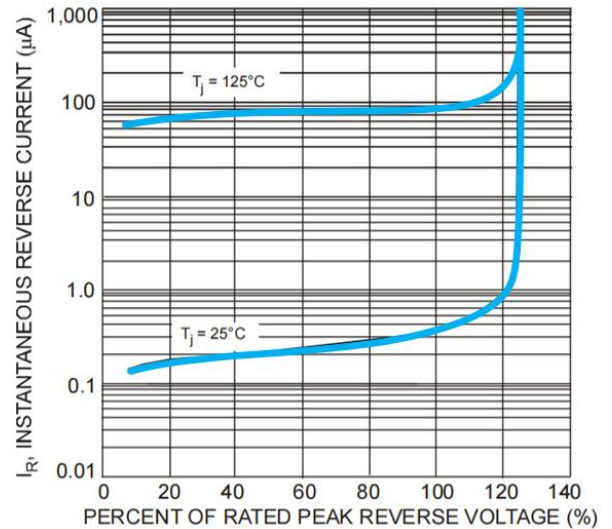


Figure 3. Typical Instantaneous Forward Characteristics

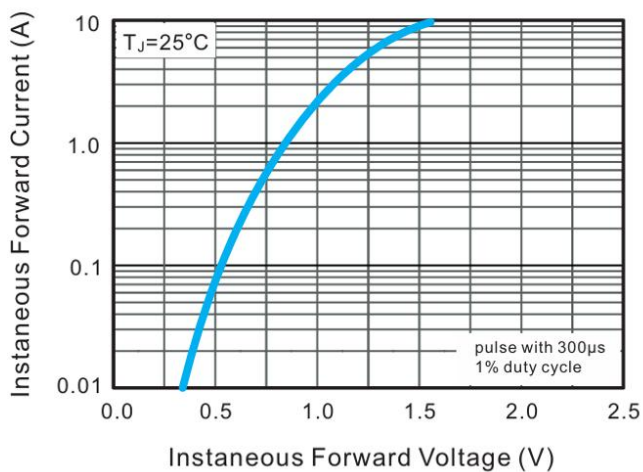


Figure 4. Typical Junction Characteristics

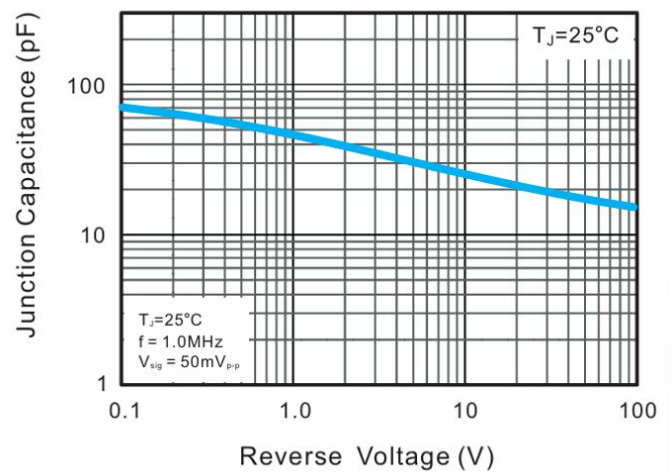
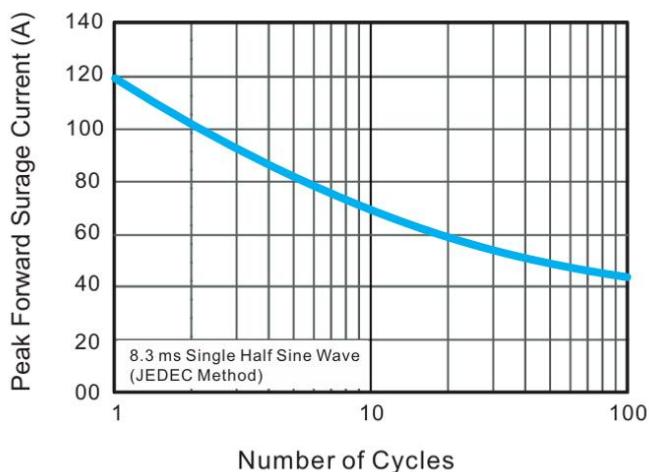
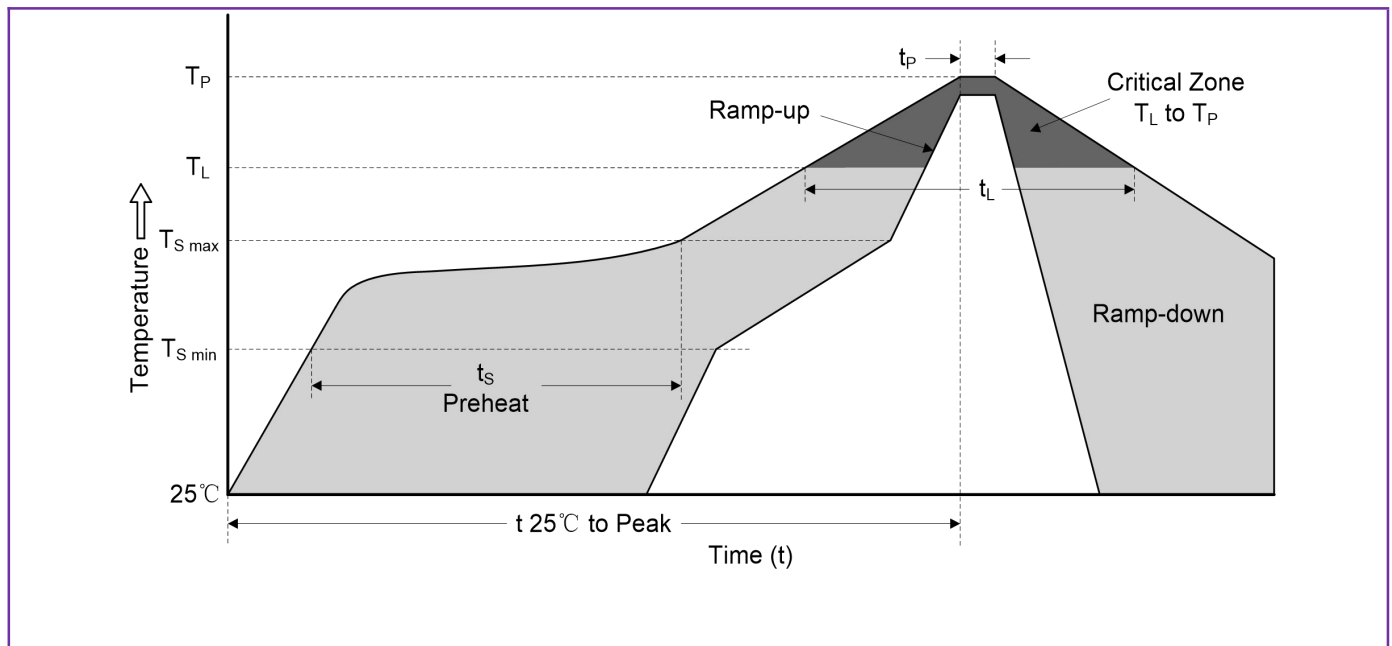


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-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