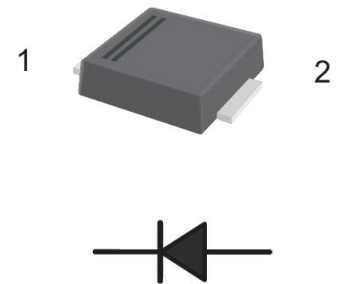


Features

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ 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



Applications

- ◆ Low voltage high frequency inverters
- ◆ DC/DC converters
- ◆ Freewheeling
- ◆ Polarity protection applications

Dimensions (SMBF)

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.10	5.50	0.201	0.217
B	3.50	3.70	0.138	0.147
C	4.20	4.40	0.165	0.173
D	0.45 typ.		0.018 typ.	
E	1.90	2.20	0.075	0.087
F	1.05	1.30	0.041	0.051
G	0.18	0.30	0.007	0.012
H	1.00 typ.		0.039 typ.	

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

Item	Symbol	RS3ABF	RS3BBF	RS3DBF	RS3GBF	RS3JBF	RS3KBF	RS3MBF	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@T _C =125℃	I _O	3.0							A
Maximum Forward Voltage@3A	V _F	1.3							V
Peak Reverse Current at Rated DC Blocking Voltage	I _R @25℃	5 100							μA
	I _R @125℃								
Typical Total Capacitance at V _R =4V,f=1MHz	C _T	40							pF
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	80							A
Maximum Reverse Recovery Time(Note1)	trr	150				250	500		ns
Typical Thermal Resistance (Note2)	R _{θJA}	45							℃/W
	R _{θJC}	15							
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							℃

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. Maximum Average Forward Current Rating

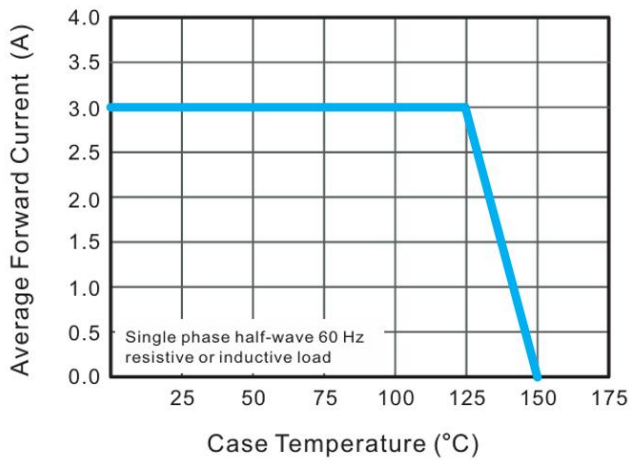


Figure 2. Typical Reverse Characteristics

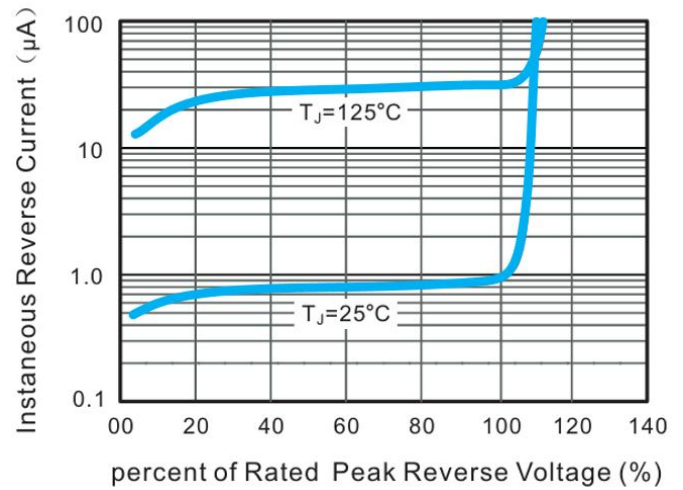


Figure 3. Typical Forward Voltage

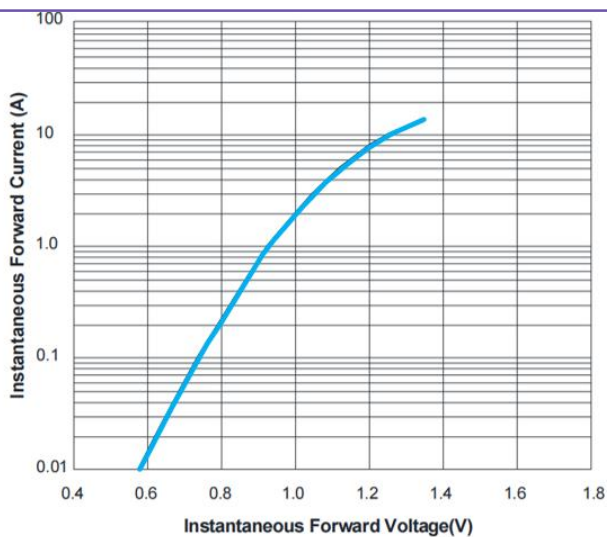


Figure 4. Typical Junction Capacitance

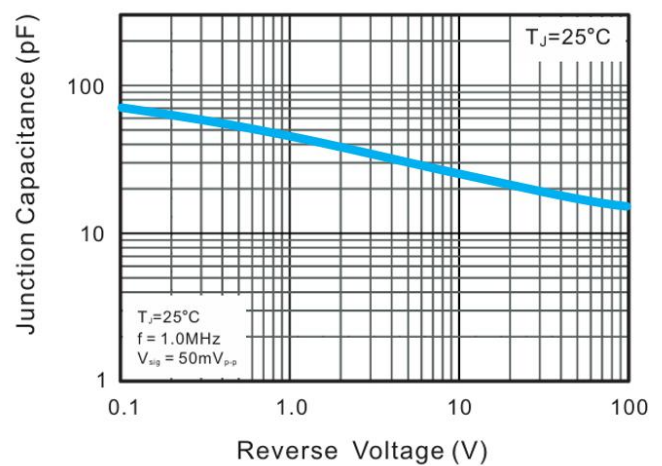
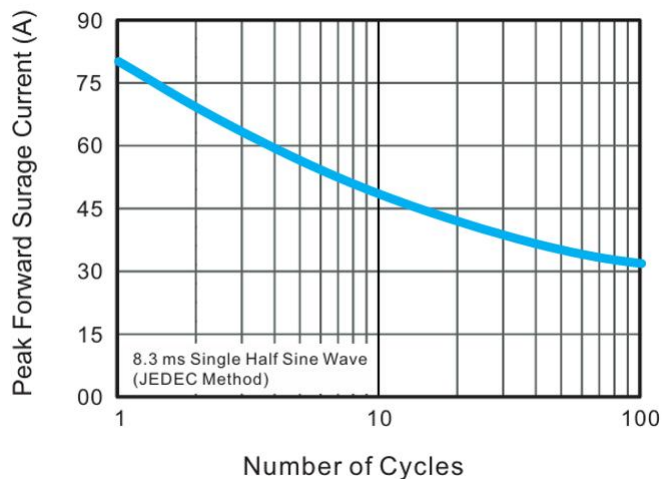
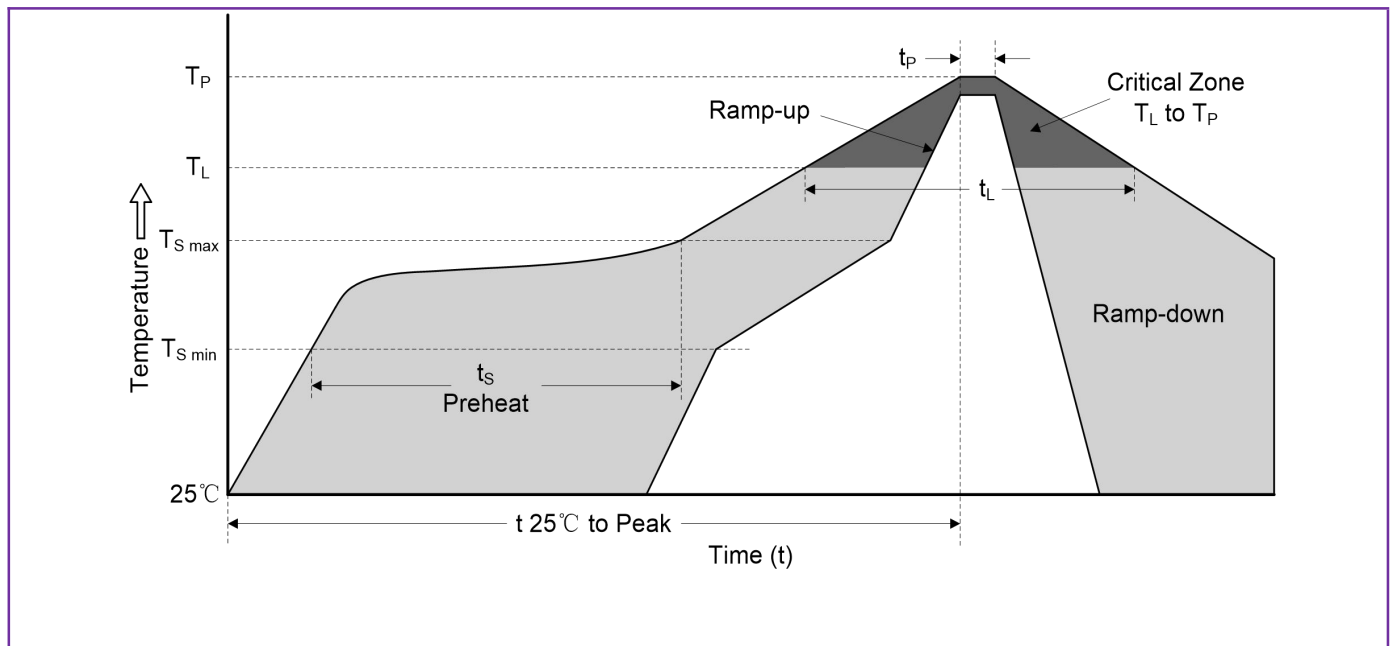


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current



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