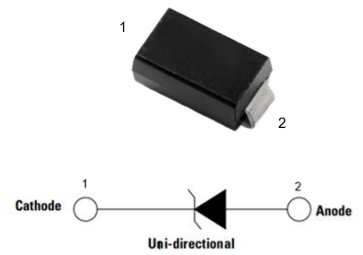


Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High frequency
- ◆ High forward surge capability
- ◆ Meets MSL level 1, per J-STD-020,LF maximum peak of 260°C



Mechanical Data

- ◆ Case: SMA
- ◆ Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 1 per J-STD-020
- ◆ Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- ◆ Polarity: Cathode Band or Cathode Notch
- ◆ SMA Weight: 0.064 grams (approximate)

Dimensions (SMA)

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.250	1.650	0.049	0.065
B	3.990	4.550	0.157	0.178
C	2.540	2.790	0.100	0.110
D	1.900	2.290	0.074	0.090
E	0.780	1.550	0.030	0.061
F	-	0.203	-	0.008
G	4.70	5.280	0.185	0.208
H	0.152	0.305	0.006	0.012
I	1.800	-	0.070	-
J	2.100	-	0.082	-
K	-	2.300	-	0.090

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

Item	Symbol	Conditions		ES1A	ES1B	ES1D	ES1G	ES1J	Unit
Repetitive Peak Reverse Voltage	V _{RRM}			50	100	200	400	600	V
Average e Forward Current	I _O	Half-sine wave, Resistance load		1.0					A
Surge(Non-repetitive) Forward Current	I _{FSM}	60HZ sine wave, 1 cycle, Ta=25℃		30					A
Current Squared Time	I ² t	1ms≤t<8.3ms Tj=25℃,Rating of per diode		3.7					A ² s
Thermal Resistance	R _{θJ-A}	Between junction and case		85					℃/W
Storage Temperature	T _{STG}			-55 ~ +150					℃
Junction Temperature	T _J			-55 ~ +150					℃
Peak Forward Voltage	V _{FM}	I _F =1.0A		0.95			1.3	1.7	V
Peak Reverse Current	I _{RRM1}	V _{RM} =V _{RRM}	Ta=25℃	5					μA
	I _{RRM2}		Ta=125℃	200					
Maximum reverse recovery time	T _{rr}	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		35					ns

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

Figure 1. Forward Current Derating Curve

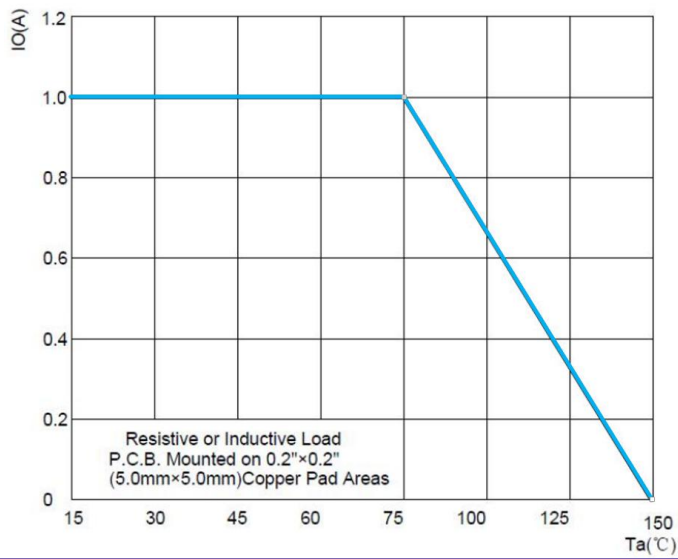


Figure 2. Surge Forward Current Capability

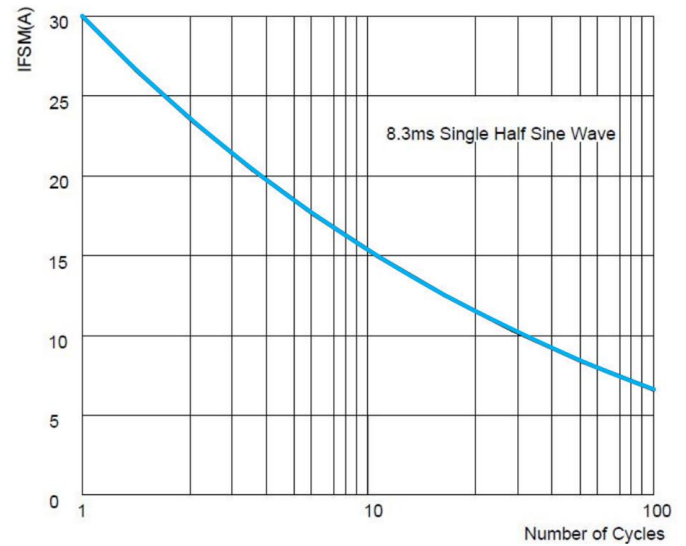


Figure 3. Instantaneous Forward Voltage

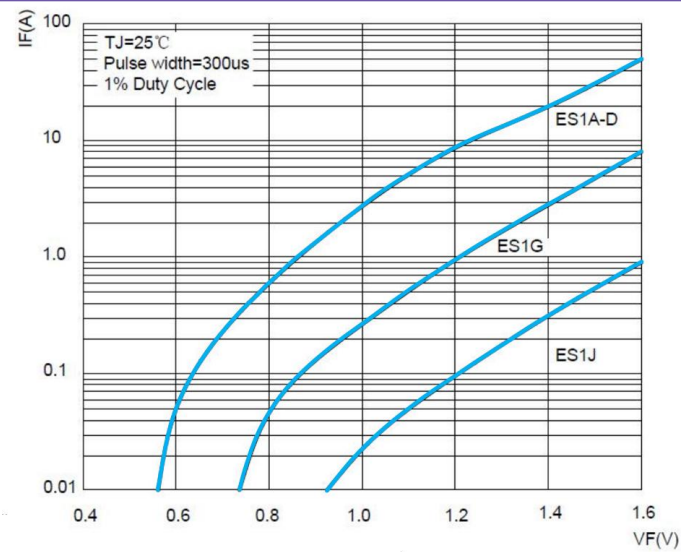
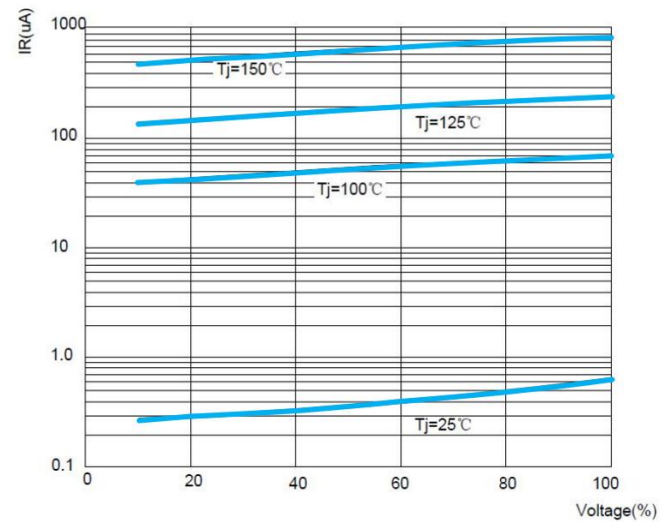
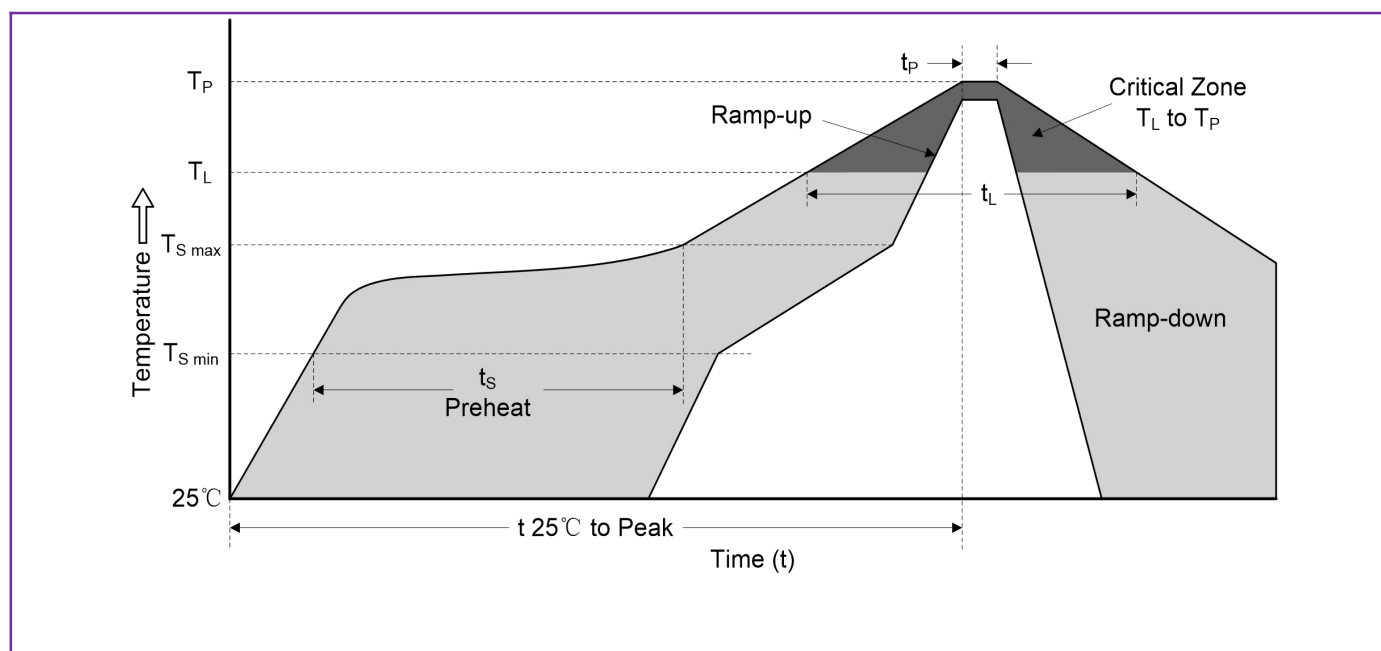


Figure 4. Typical Reverse Characteristics



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