Features

- The plastic package carries UL Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals

Mechanical Characteristics

- Case: SMAF package molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0012 ounce, 0.034 grams

Absolute Maximum Ratings and Electrical Parameters (TA=25°C unless otherwise specified)

PARAMETER		SYMBOL	**G1AF**	**G1BF**	**G1DF**	**G1GF**	**G1JF**	**G1KF**	**G1MF**	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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_{AV}	1							A
Peak forward surge current (NOTE1)		I_{FSM}	30							A
Maximum instantaneous forward voltage at 1A		V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage	T_A=25 ℃	I_R	5							uA
	T_A=100 ℃	I_{RT}	50							uA
Typical junction capacitance (NOTE 2)		C_J	15							pF
Typical Thermal Resistance Junction to Ambient (NOTE3)		$R_{\theta JA}$	75							℃/W
Typical Thermal Resistance Junction to Lead (NOTE3)		$R_{\theta JL}$	22							℃/W
Operating Temperature Range		T_J	-55 to 150							℃
Storage Temperature Range		T_{STG}	-55 to 150							℃

Note1: 8.3ms single half sine-wave superimposed on rated load

Note2: Measured at 1MHz and applied reverse voltage of 4.0V DC.

Note3: PCB. mounted with 5×5mm copper pad areas

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMAF	Tape/Reel,11" reel	5000	EIA-481-1
	Tape/Reel,7" reel	3000	EIA-481-1

Rating And Characteristic Curves (T_A=25°C unless otherwise noted)

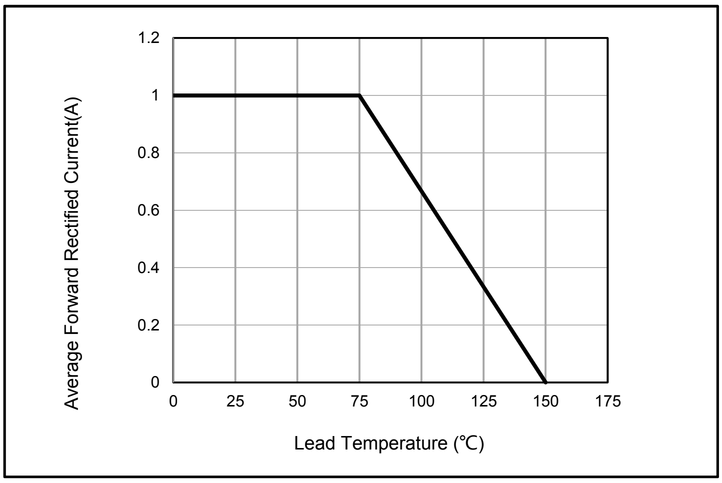


Fig. 1 - Forward Current Derating Curve

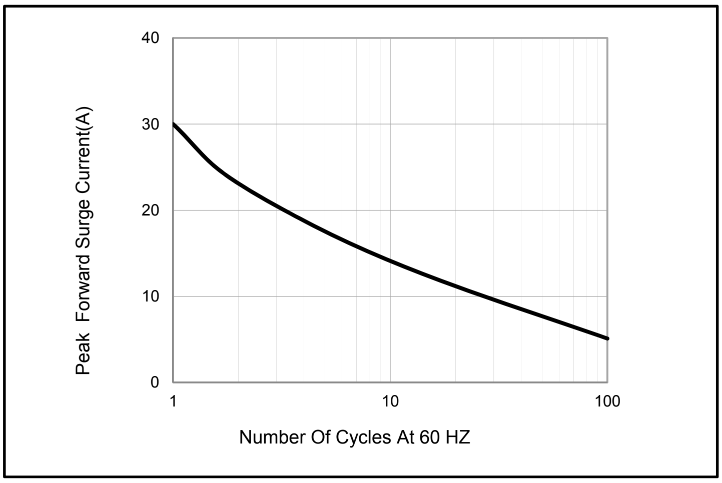


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

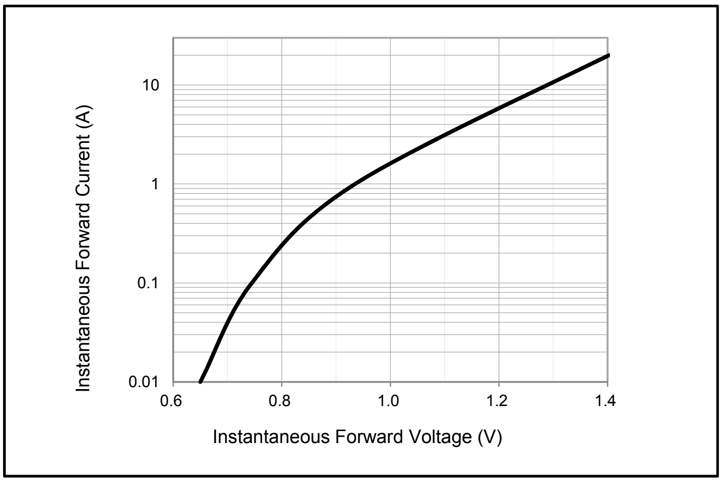


Fig. 3 - Typical Instantaneous Forward Characteristics

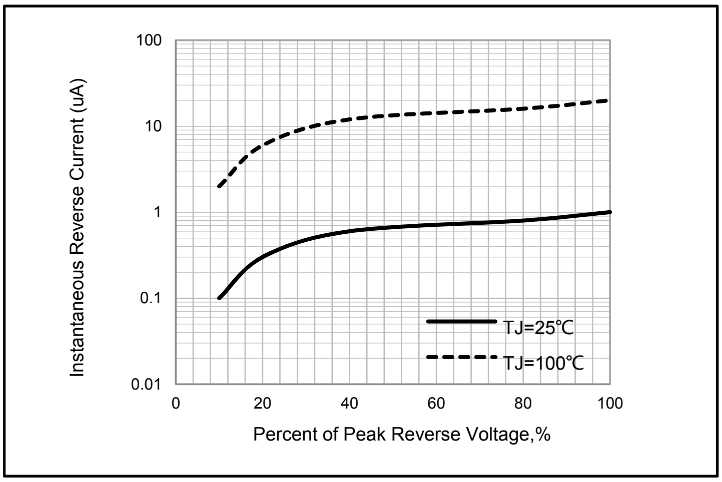


Fig. 4 - Typical Reverse Characteristics

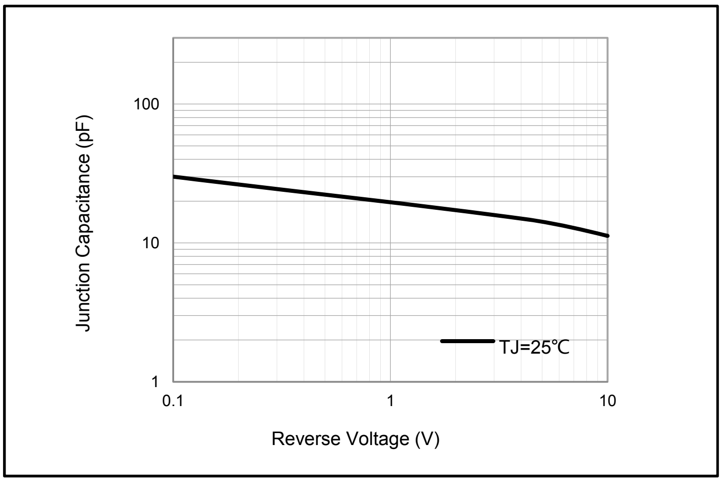


Fig. 5 - Typical Junction Capacitance

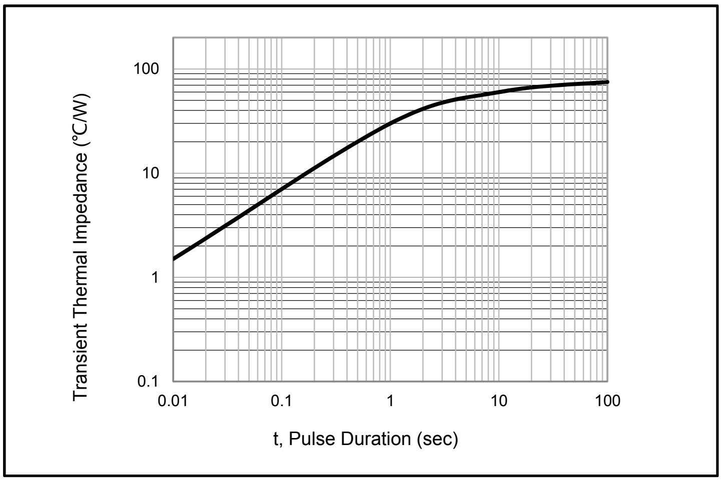
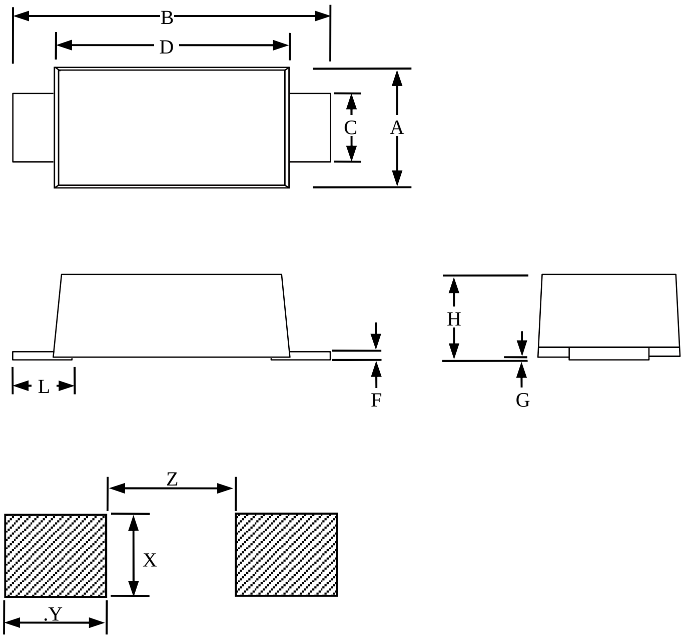


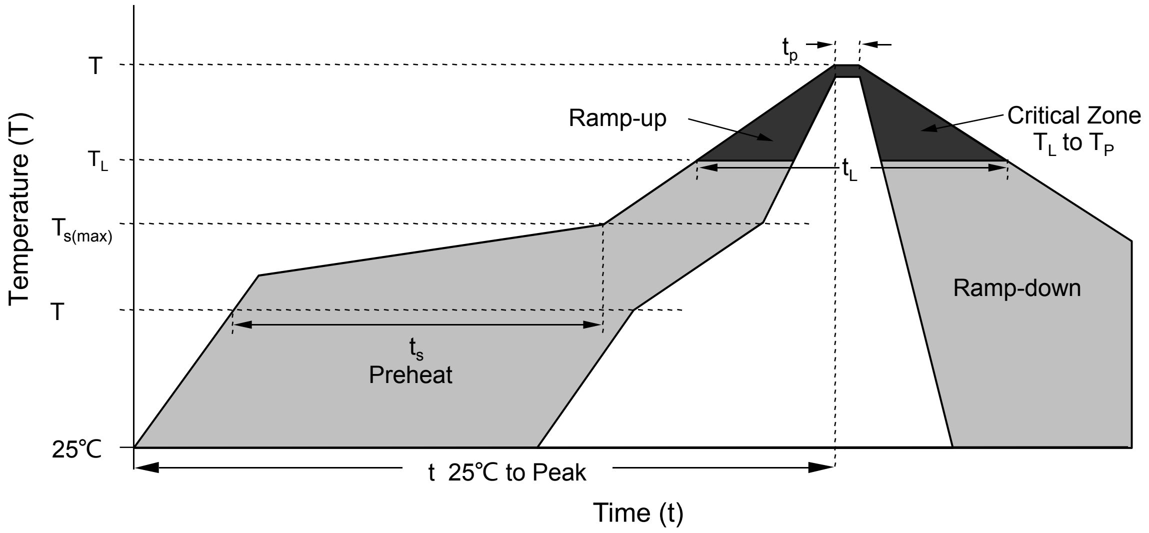
Fig. 6 - Typical Transient Thermal Impedance

Package Dimensions



SMAF						
Dimension	Inches			Millimeters		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.094		0.11	2.4		2.8
B	0.173		0.189	4.4		4.8
C	0.051		0.059	1.3		1.5
D	0.128		0.144	3.25		3.65
L	0.028		0.047	0.7		1.2
F	0.006		0.012	0.15		0.3
G	-		0.004	-		0.1
H	0.043		0.055	1.1		1.4
X		0.067			1.7	
Y		0.098			2.5	
Z		0.059			1.5	

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 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Time (t_L)	60 – 150 secs
Peak Temperature (T_P)		$260^{+0/-5\,°C}$
Time within 5°C of actual peak Temperature (t_p)		20 – 40 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C