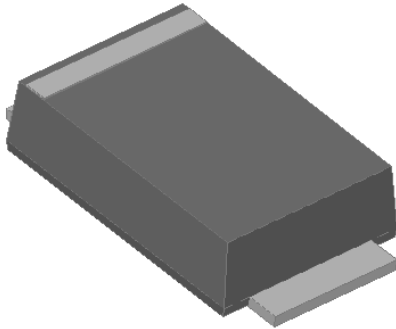


## Surface Mount General Purpose Rectifier

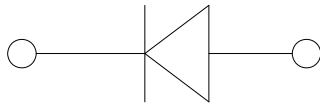


### Features

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

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.



### Mechanical Data

- **Package:** SMAF  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Device marking code			G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I <sub>O</sub>	A	1.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			60						
Current squared time @1ms≤t≤8.3ms T <sub>j</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s	3.735						
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150						
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150						

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Maximum instantaneous forward voltage	V <sub>F</sub>	V	I <sub>FM</sub> =1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	5.0						
			T <sub>j</sub> =125°C	100						
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	7						



# G1AFS THRU G1MFS

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Typical Thermal resistance	$R_{\theta\text{-A}}^{(1)}$	$^\circ\text{C/W}$	65						
	$R_{\theta\text{-L}}^{(1)}$		20						
	$R_{\theta\text{-C}}^{(1)}$		15						

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## ■ Characteristics (Typical)

FIG.1:  $I_o$ - $T_L$  Curve

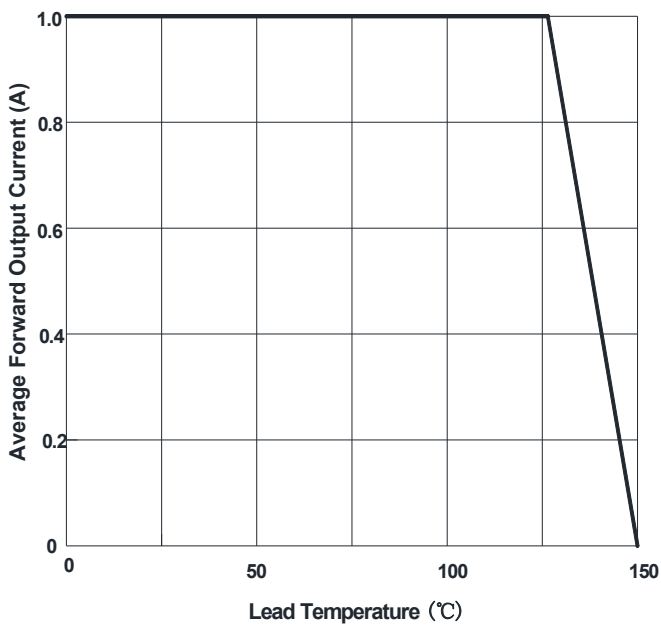


FIG.2: Forward Surge Current Capability

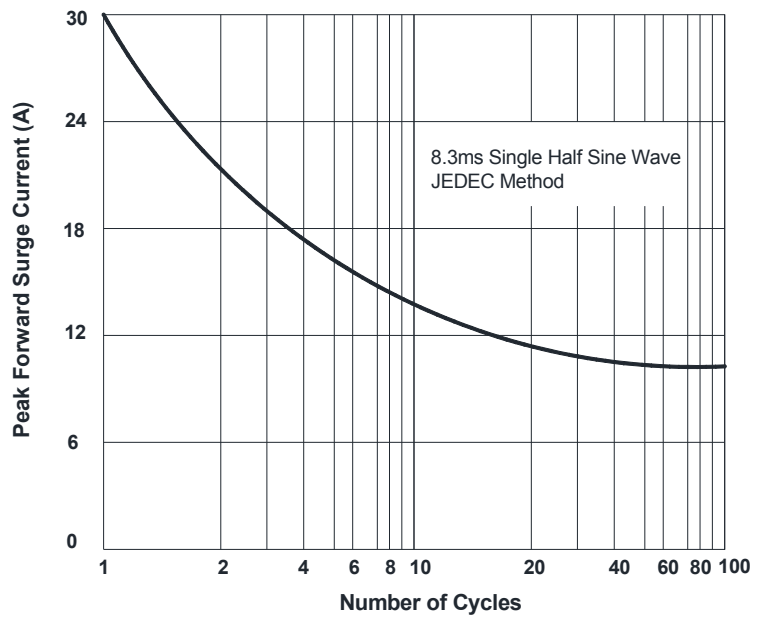


FIG.3: Typical Forward Voltage

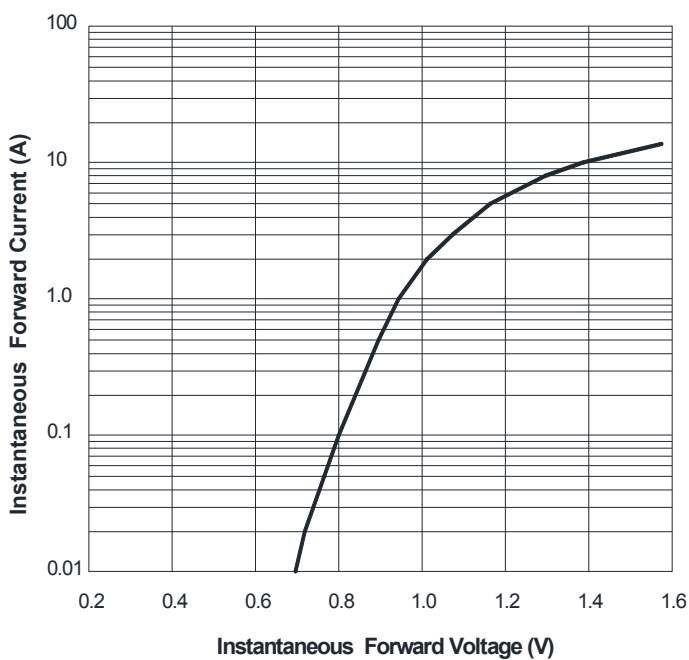
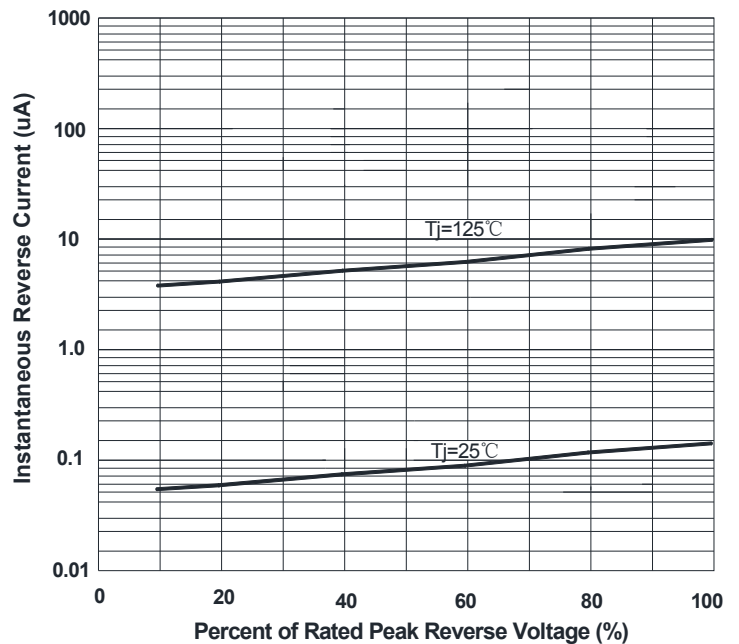


FIG.4: Typical Reverse Characteristics



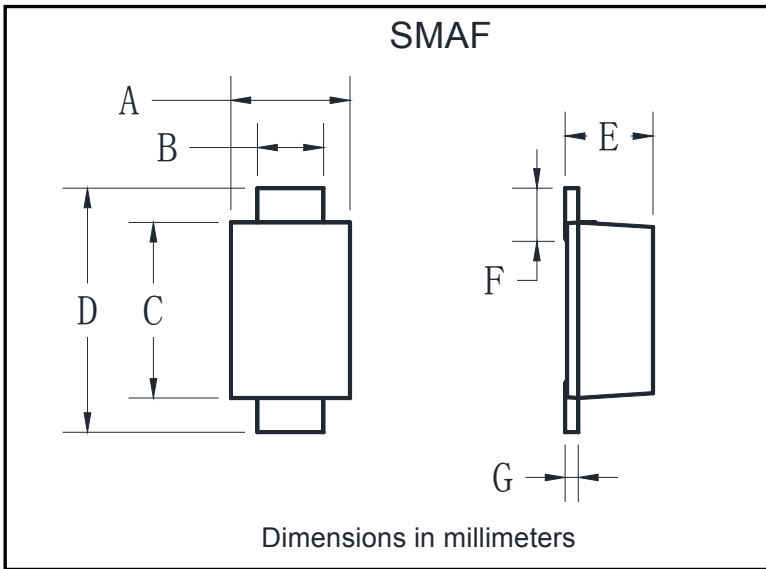


# G1AFS THRU G1MFS

## Ordering Information (Example)

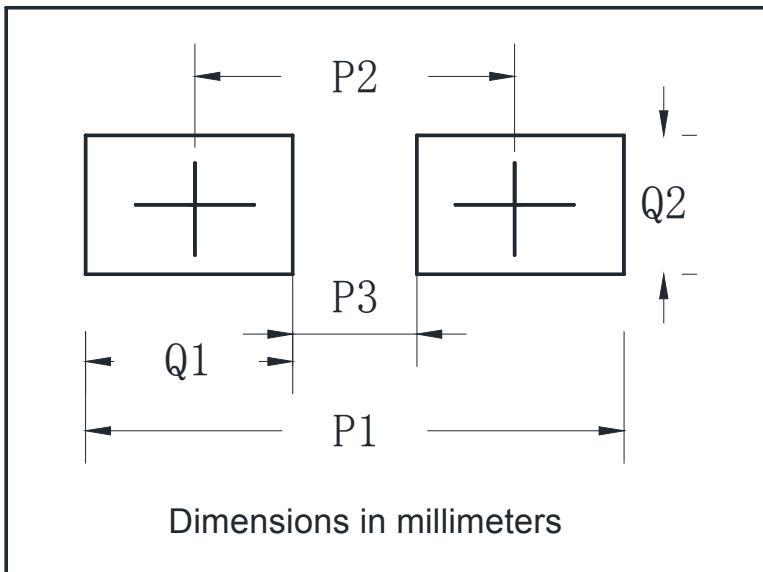
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AFS-G1MFS	F1	Approximate 0.034	3000	24000	96000	7" reel
G1AFS-G1MFS	F2	Approximate 0.034	10000	/	160000	13" reel
G1AFS-G1MFS	F3	Approximate 0.034	10000	/	120000	13" reel
G1AFS-G1MFS	F4	Approximate 0.034	7500	/	120000	13" reel

## Outline Dimensions



SMAF		
Dim	Min	Max
A	2.40	2.80
B	1.35	1.45
C	3.40	3.60
D	4.40	4.80
E	1.05	1.25
F	0.50	1.00
G	0.15	0.22

## Suggested pad layout



SMAF	
Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70



## G1AFS THRU G1MFS

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