

Surface Mount General Purpose Rectifier

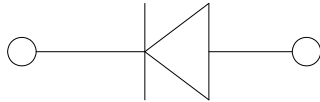


Features

- 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
Repetitive peak reverse voltage	VRRM	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	1.0						
Surge(non-repetitive)forward current @60Hz Half-sine wave,1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	30						
Storage temperature	Tstg	°C	-55~+150						
Junction temperature	Tj	°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 drop per diode	VF	V	IFM=1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode @VRM=VRRM	IRRM	μA	$T_a=25^\circ\text{C}$	5.0						
			$T_a=125^\circ\text{C}$	100						



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 θ J-A	$^\circ\text{C}/\text{W}$	65 ¹⁾						
	R θ J-L		25 ¹⁾						

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

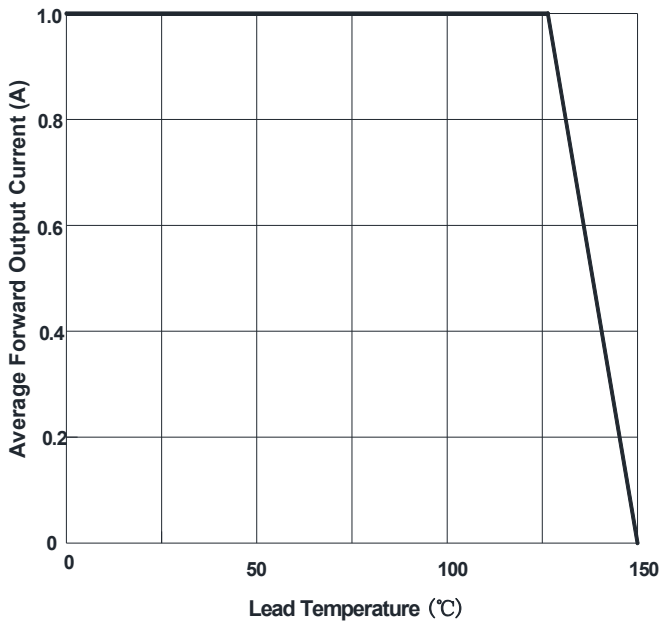


FIG.2: Forward Surge Current Capability

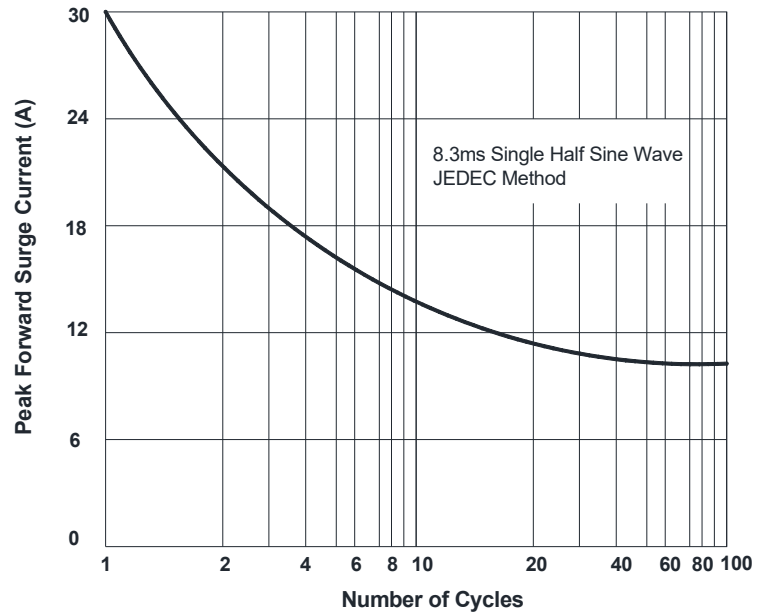


FIG.3: Typical Forward Voltage

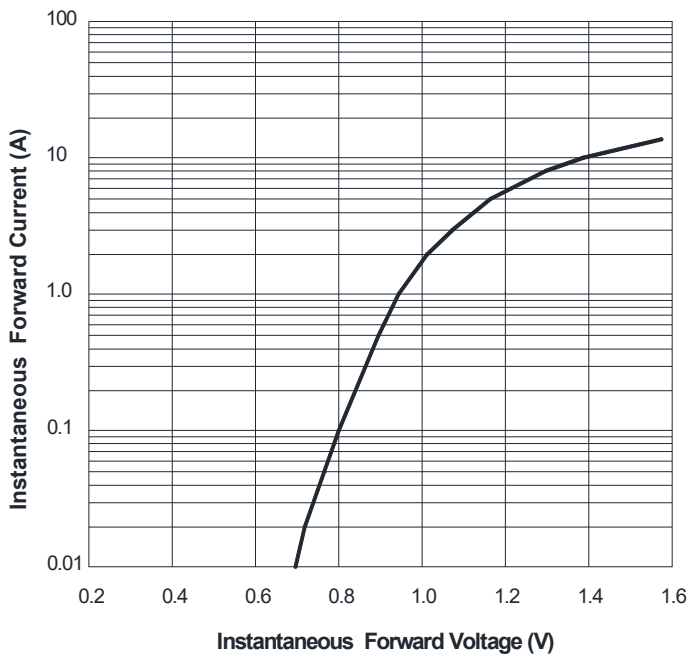
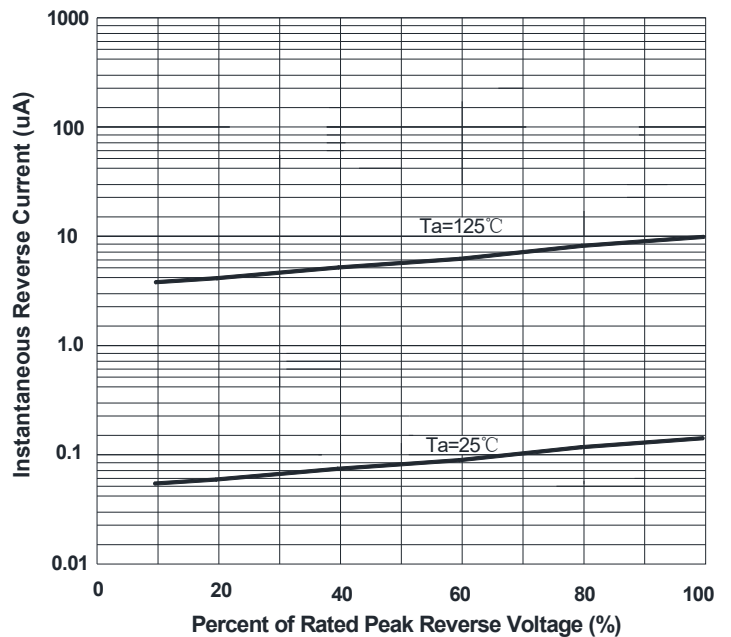


FIG.4: Typical Reverse Characteristics



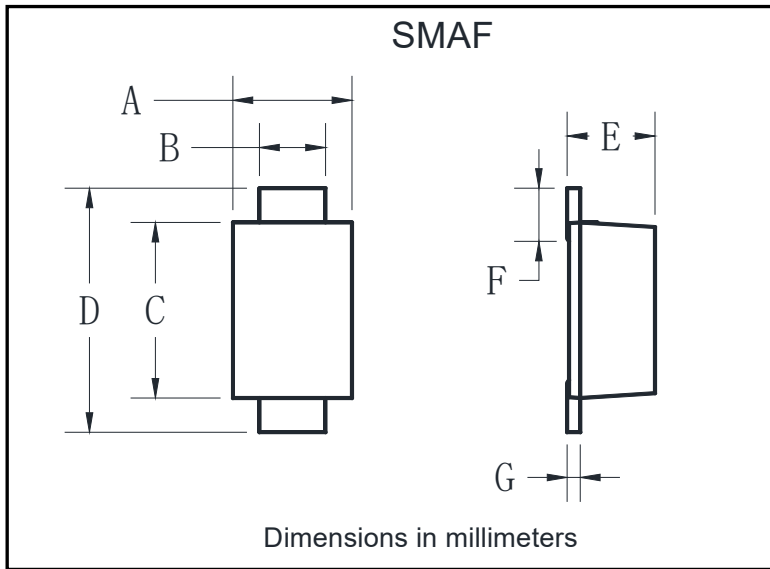


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Ordering Information (Example)

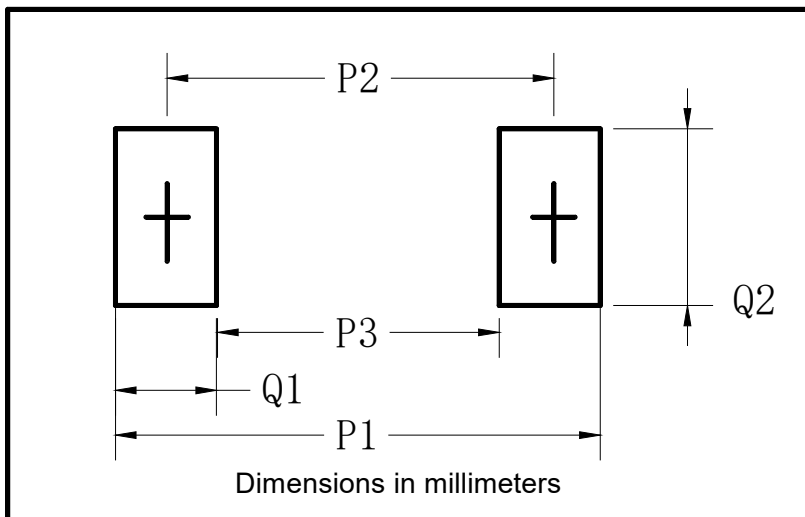
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AFS-G1MFS	F1	Approximate 0.034	3000	12000	96000	7" reel
G1AFS-G1MFS	F2	Approximate 0.034	10000	20000	160000	13" reel
G1AFS-G1MFS	F3	Approximate 0.034	10000	20000	120000	13" reel
G1AFS-G1MFS	F4	Approximate 0.034	7500	15000	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



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