

Surface Mount General Purpose Rectifier

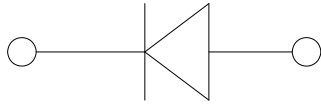


Features

- 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	G2AF	G2BF	G2DF	G2GF	G2JF	G2KF	G2MF
Device marking code			G2AF	G2BF	G2DF	G2GF	G2JF	G2KF	G2MF
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)	IO	A	2.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	I _{FSM}	A	50						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^\circ\text{C}$			100						
Current squared time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$, Rating of per diode	I ² t	A ² s	10.735						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	12						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-55 ~ +150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G2AF	G2BF	G2DF	G2GF	G2JF	G2KF	G2MF
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5.0						
			T _j =125°C	100						



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■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G2AF	G2BF	G2DF	G2GF	G2JF	G2KF	G2MF
Typical Thermal Resistance	R _{θJ-A} ⁽¹⁾	°C/W	60						
	R _{θJ-L} ⁽¹⁾		20						
	R _{θJ-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)

FIG1: I_o-T_L Curve

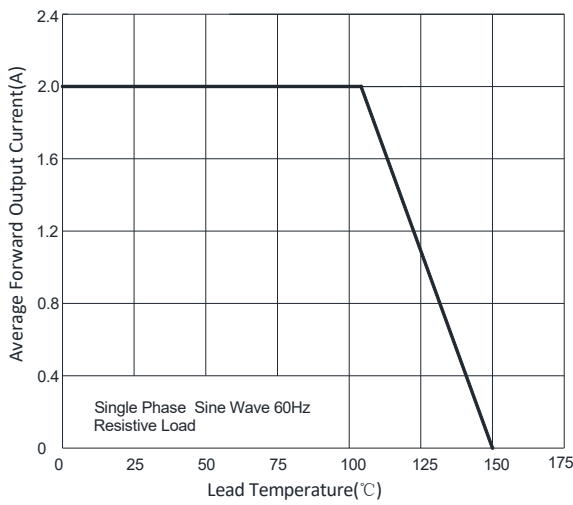


FIG2: Surge Forward Current Capability

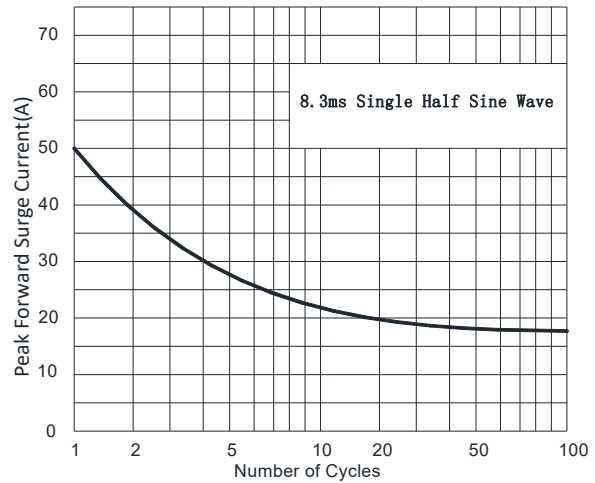


FIG3: Forward Voltage

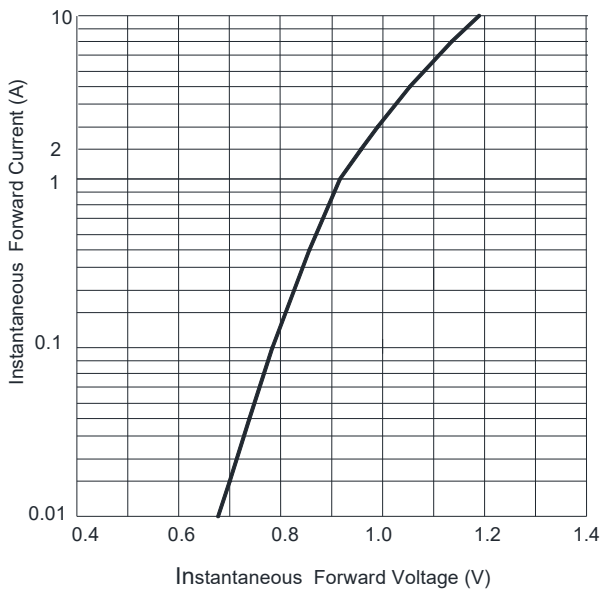
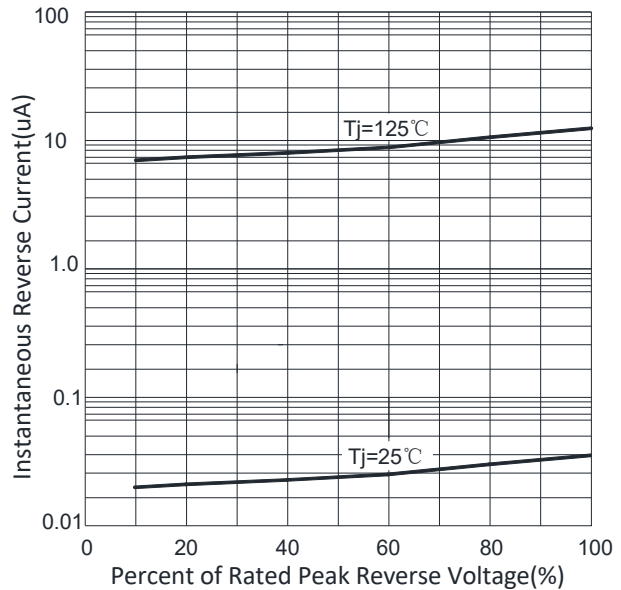


FIG4: Typical Reverse Characteristics



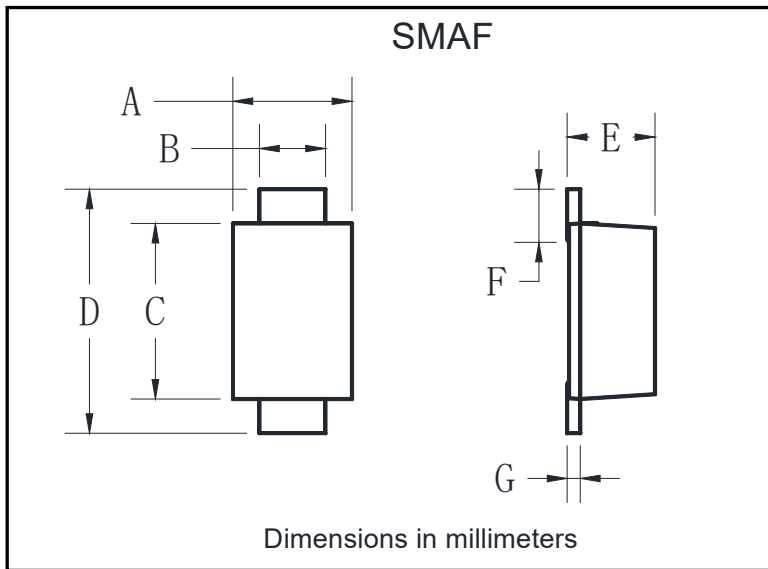


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Ordering Information (Example)

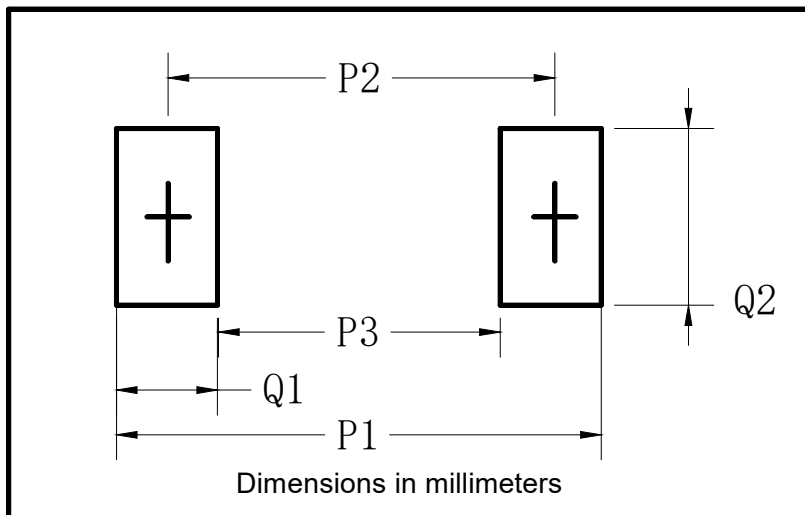
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G2AF-G2MF	F1	Approximate 0.034	3000	24000	96000	7" reel
G2AF-G2MF	F2	Approximate 0.034	10000	20000	160000	13" reel
G2AF-G2MF	F3	Approximate 0.034	10000	20000	120000	13" reel
G2AF-G2MF	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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