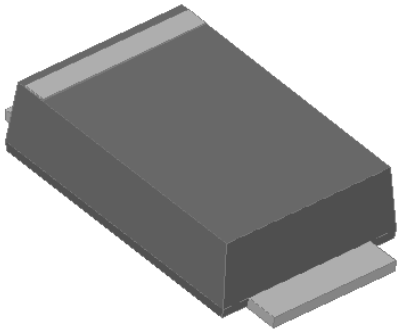
Surface Mount General Purpose Rectifier

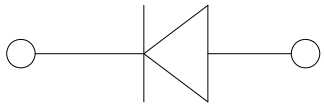


Features

- 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℃ 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	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	1.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			60						
Current squared time @1ms≤t8.3≤ms Tj=25℃，Rating of per diode	I^2t	A^2s	3.735						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	7						
Storage temperature	Tstg	℃	-55 ~ +150						
Junction temperature	Tj	℃	-55 ~ +150						

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	Tj =25℃	5.0						
			Tj =125℃	100						

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AFS	G1BFS	G1DFS	G1GFS	G1JFS	G1KFS	G1MFS
Typical Thermal resistance	$R_{\theta J-A}$(1)	℃/W	65						
	$R_{\theta J-L}$(1)		20						
	$R_{\theta J-C}$(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: Io-TL Curve

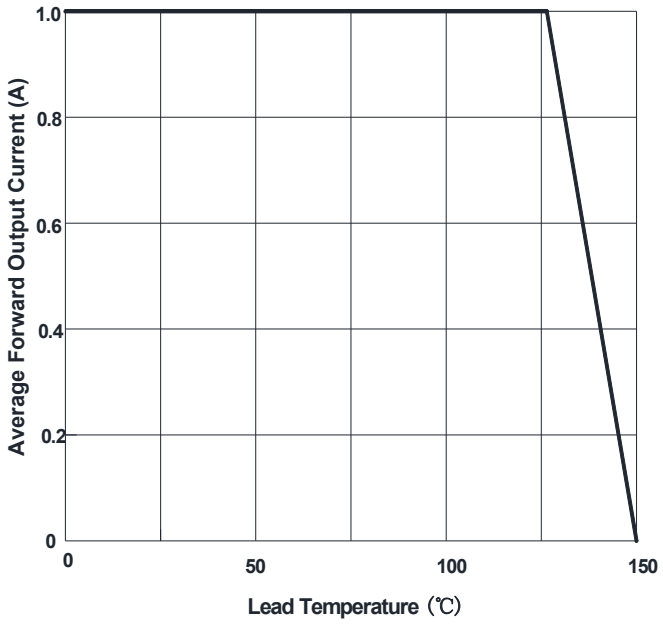


FIG.2: Forward Surge Current Capability

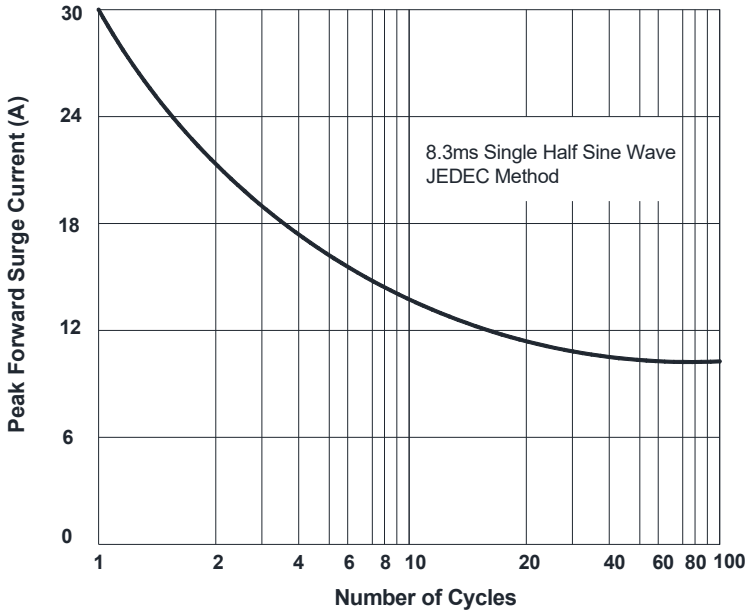


FIG.3: Typical Forward Voltage

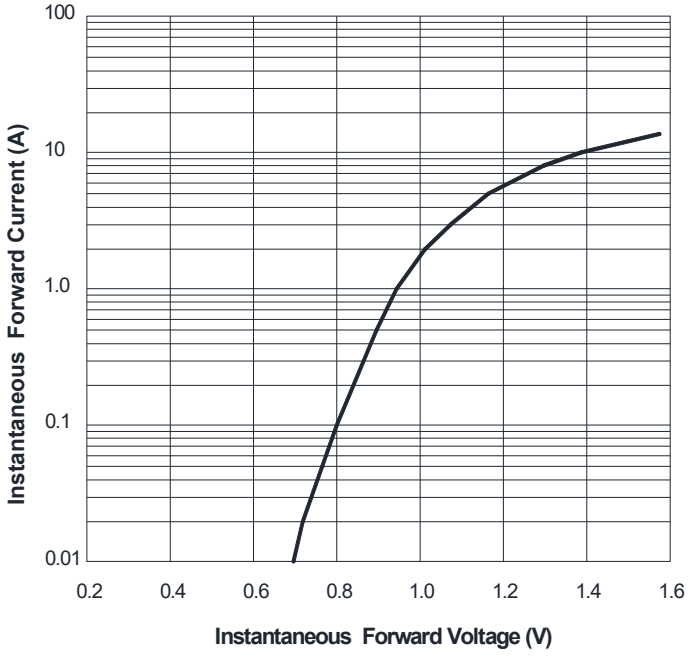
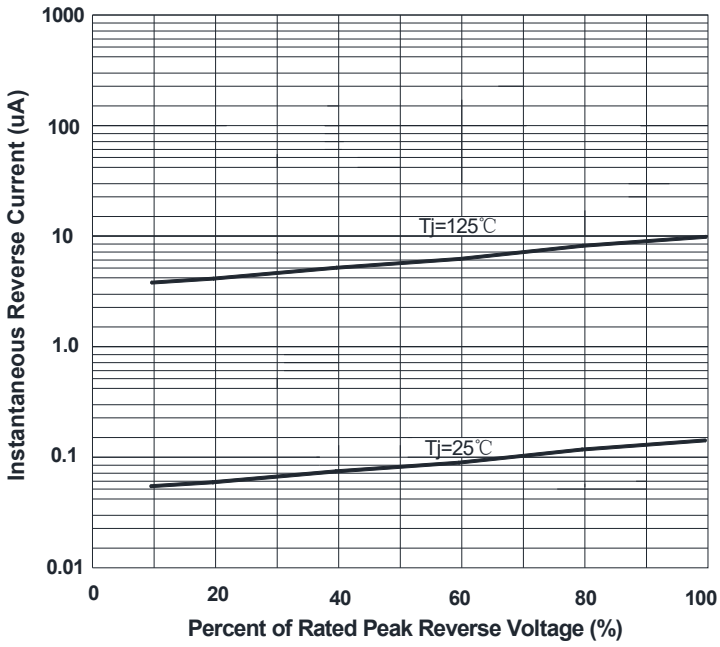


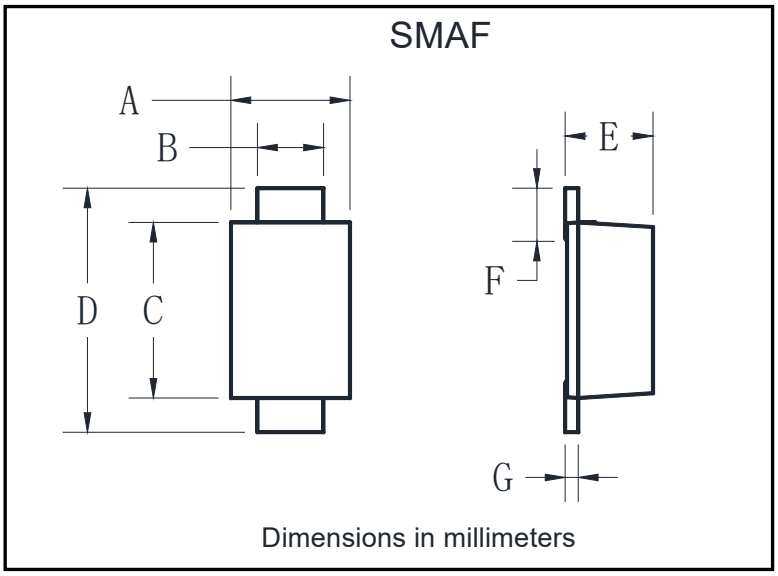
FIG.4: Typical Reverse Characteristics



■Ordering Information (Example)

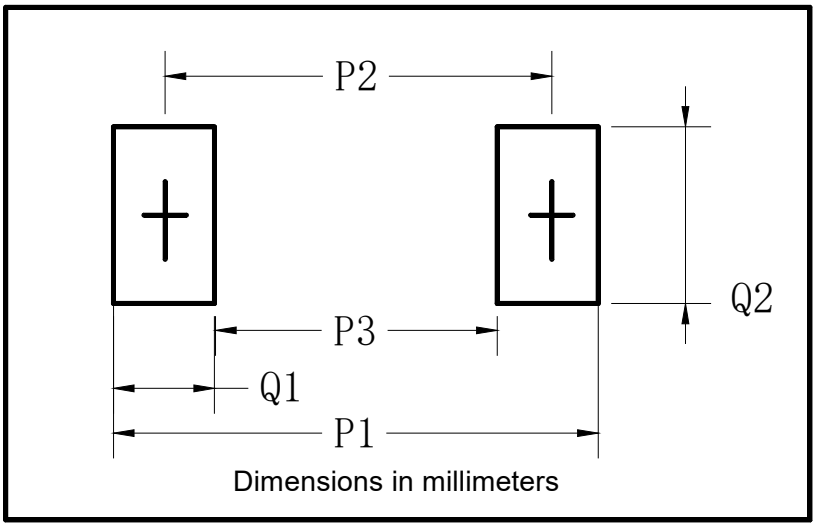
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AFS-G1MFS	F1	Approximate 0.034	3000	24000	96000	7” reel
G1AFS-G1MFS	F2	Approximate 0.034	10000	20000	160000	13” reel
G1AFS-G1MFS	F3	Approximate 0.034	10000	20000	120000	13” 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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