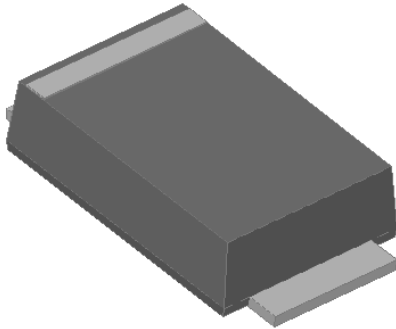


## Surface Mount General Purpose Rectifier



### 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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	M1F	M2F	M3F	M4F	M5F	M6F	M7F
Device marking code			M1F	M2F	M3F	M4F	M5F	M6F	M7F
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, Ta=25°C	IFSM	A	30						
Storage temperature	Tstg	°C	-55~+150						
Junction temperature	Tj	°C	-55~+150						

### ■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	M1F	M2F	M3F	M4F	M5F	M6F	M7F
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	Ta=25°C	5.0						
			Ta=125°C	100						



# M1F THRU M7F

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	M1F	M2F	M3F	M4F	M5F	M6F	M7F
Typical Thermal resistance	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	60 <sup>(1)</sup>						
	R <sub>θJ-L</sub> <sup>(1)</sup>		20 <sup>(1)</sup>						

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<sub>o</sub>-T<sub>L</sub> Curve

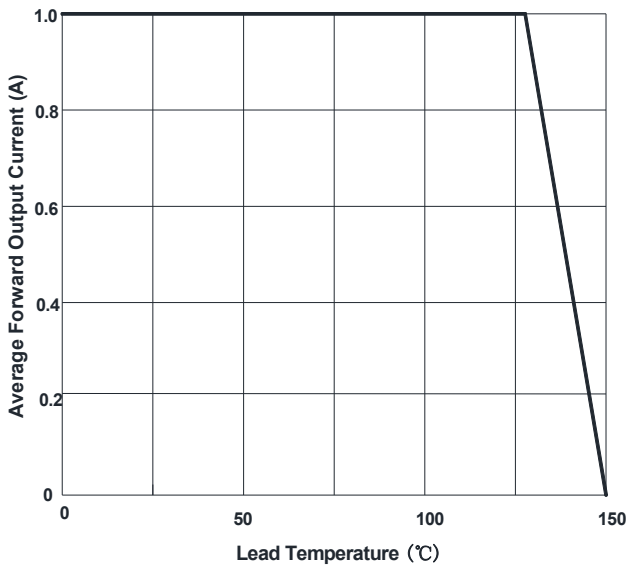


FIG.2: Forward Surge Current Capability

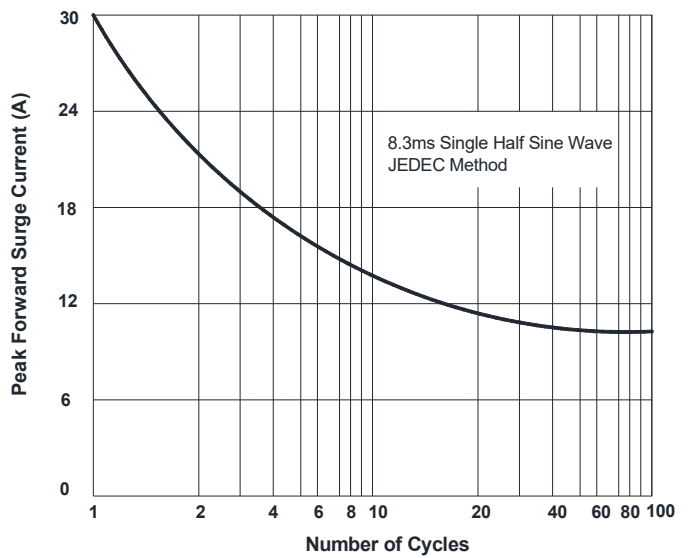


FIG.3: Typical Forward Voltage

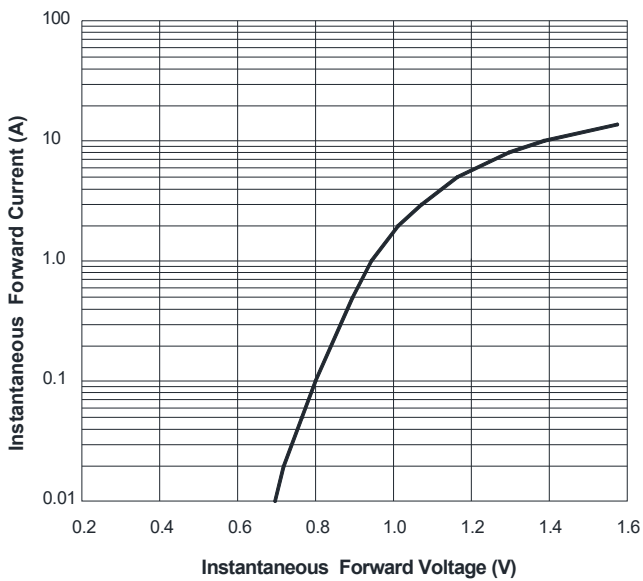
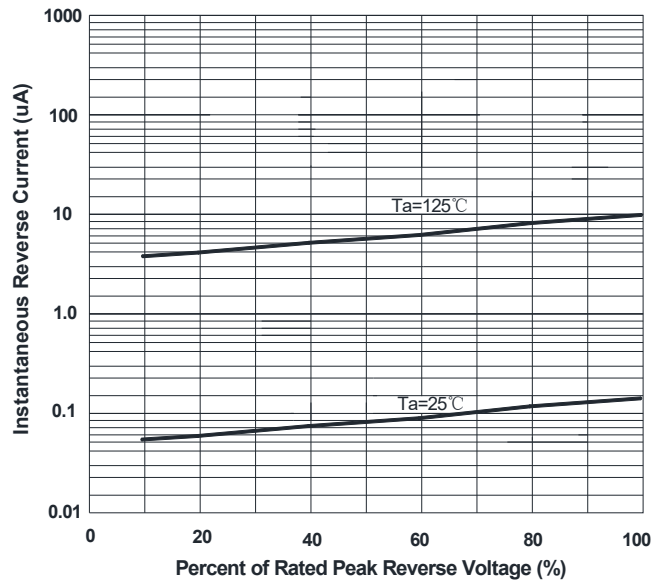


FIG.4: Typical Reverse Characteristics



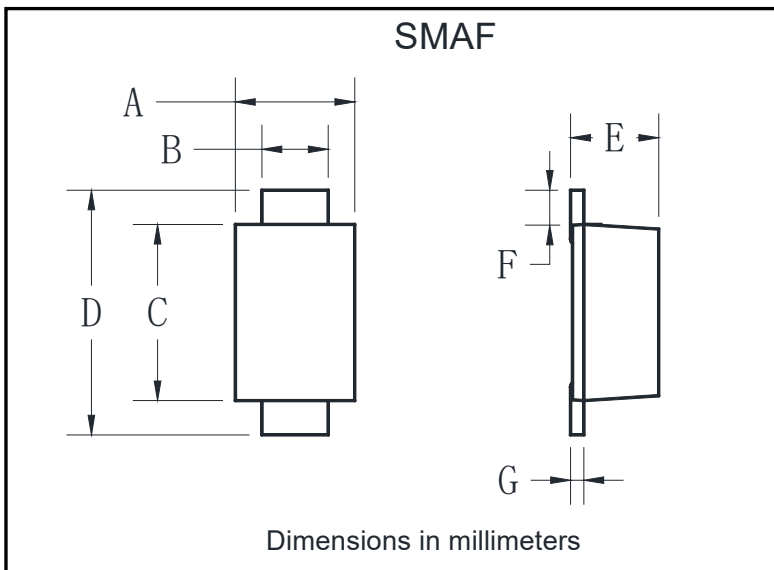


# M1F THRU M7F

## Ordering Information (Example)

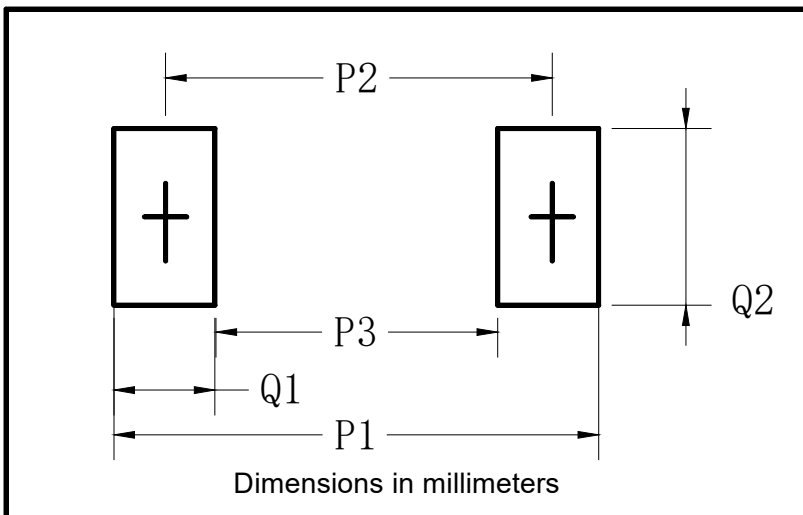
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
M1F-M7F	F1	Approximate 0.034	3000	12000	96000	7" reel
M1F-M7F	F2	Approximate 0.034	10000	20000	160000	13" reel
M1F-M7F	F3	Approximate 0.034	10000	20000	120000	13" reel
M1F-M7F	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	0.45	0.65
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



## M1F THRU M7F

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