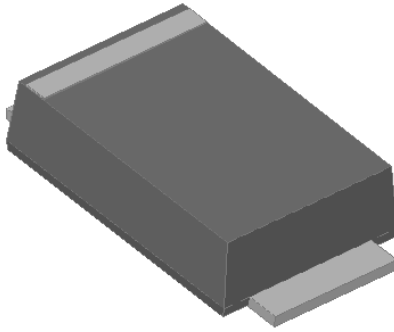


Surface Mount General Purpose Rectifier

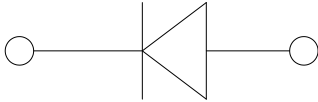


Features

- 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, automotive, 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	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, T_L (Fig.1)	I_O	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	T_{stg}	$^\circ\text{C}$	-55~+150						
Junction temperature	T_j	$^\circ\text{C}$	-55~+150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	M1F	M2F	M3F	M4F	M5F	M6F	M7F
Maximum instantaneous forward voltage drop per diode	V_F	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						

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

PARAMETER	SYMBOL	UNIT	M1F	M2F	M3F	M4F	M5F	M6F	M7F
Thermal resistance	$R_{\theta J-L(1)}$	$^\circ\text{C/W}$	20 ¹⁾						



M1F THRU M7F

Ordering Information (Example)

PREFERRED 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	7500	15000	120000	13" reel

Characteristics (Typical)

FIG1: Io-TL Curve

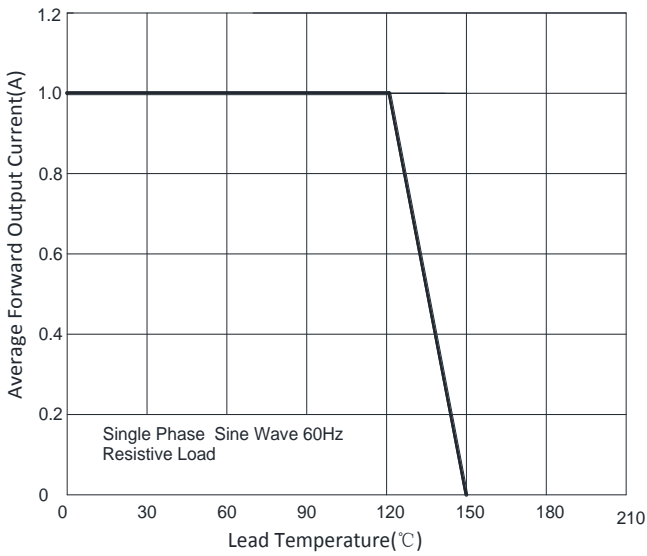


FIG2: Surge Forward Current Capability

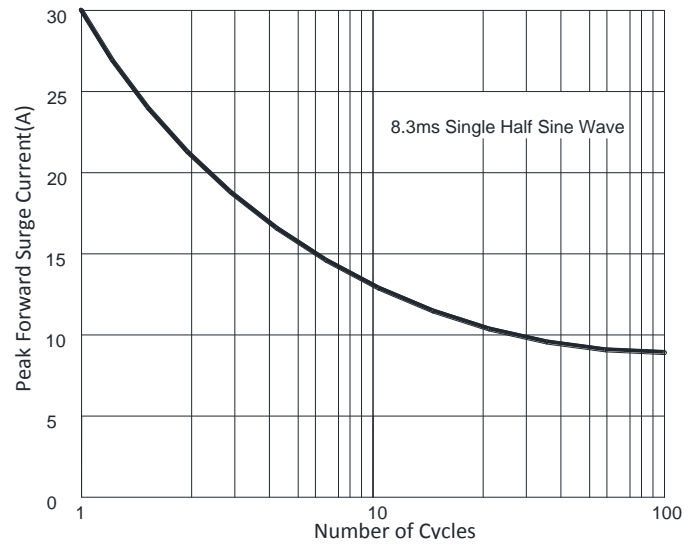


FIG3: Forward Voltage

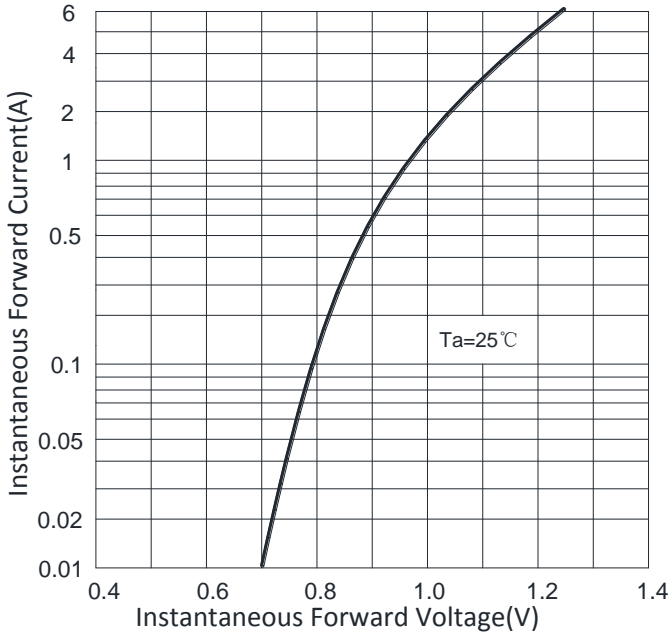


FIG4: Typical Reverse Characteristics

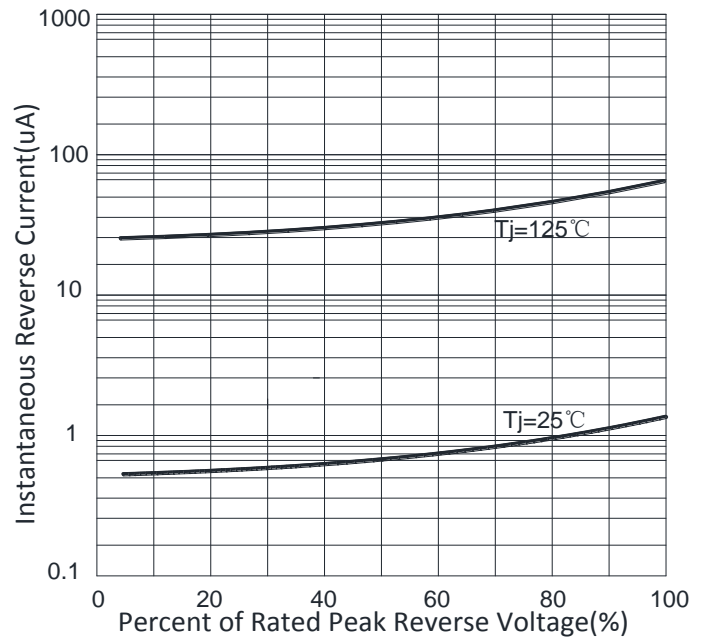
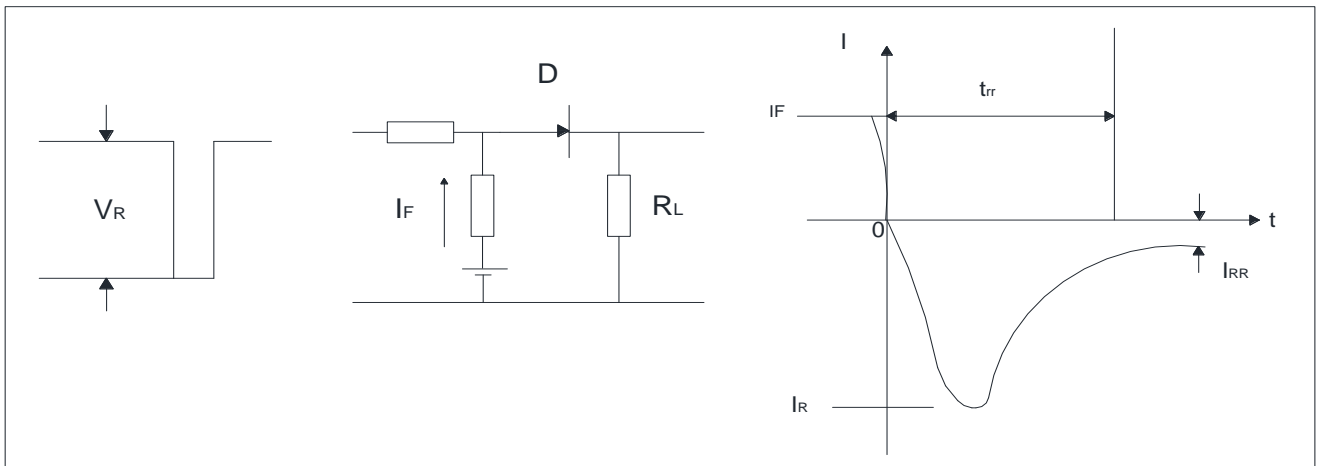
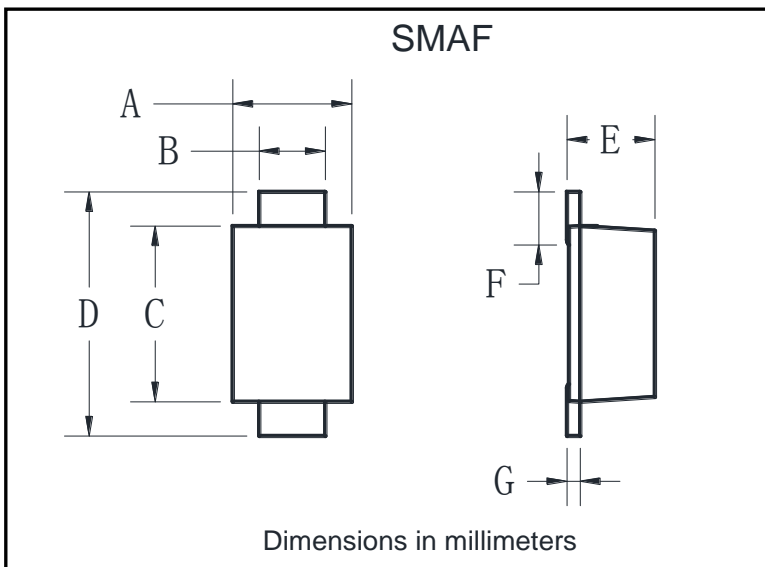


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

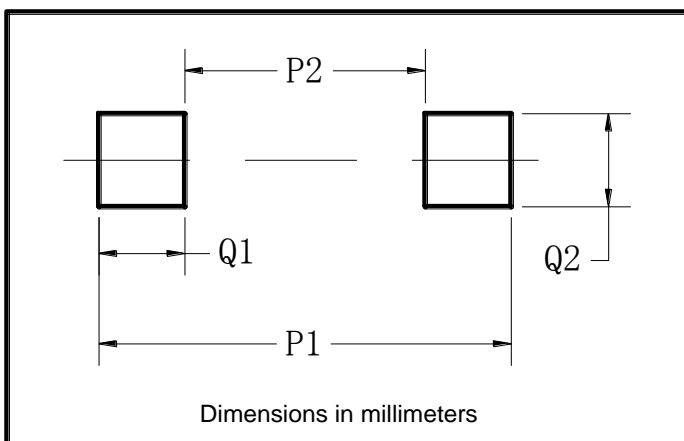


■ Outline Dimensions



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



Dim	Min
P1	5.90
P2	2.70
Q1	1.60
Q2	1.90



M1F THRU M7F

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