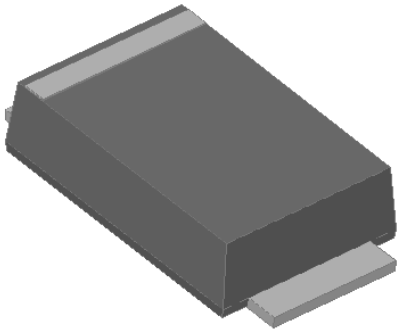
Surface Mount Super Fast Recovery Rectifier

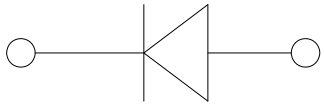


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency 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℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	E3GF
Device marking code			E3GF
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	400
Maximum RMS Voltage	V_{RMS}	V	280
Maximum DC blocking Voltage	V_{DC}	V	400
Average rectified output current @60Hz half-sine wave, resistance load, TL (Fig.1)	I_O	A	3.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	70
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			140
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	20.4
Storage temperature	T_{stg}	℃	-55 ~ +150
Junction temperature	T_j	℃	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	E3GF
Maximum instantaneous forward voltage	V_F	V	I_{FM}=1.0A	1.3
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	35
Maximum DC reverse current at rated DC blocking voltage	I_R	μA	T_j =25℃	5.0
			T_j =125℃	100
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	42

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

PARAMETER	SYMBOL	UNIT	E3GF
Typical Thermal resistance	$R_{\theta J-A}$(1)	℃/W	75
	$R_{\theta J-L}$(1)		20
	$R_{\theta J-C}$(1)		17

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：Io-TL Curve

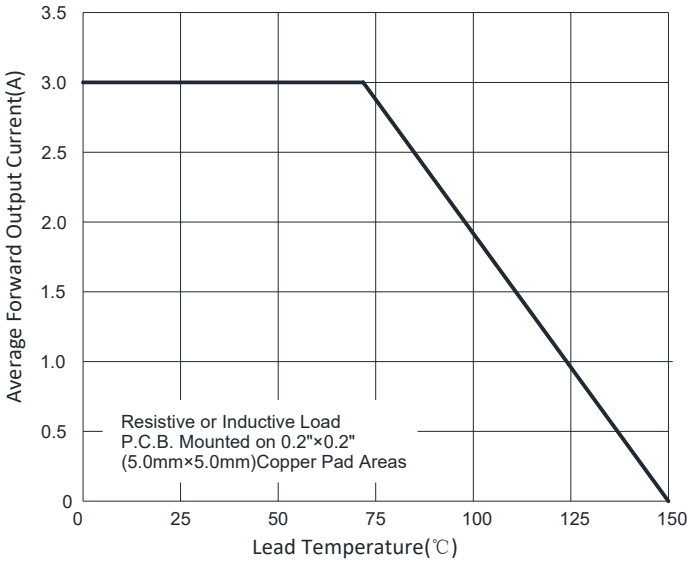


FIG2：Surge Forward Current Capability

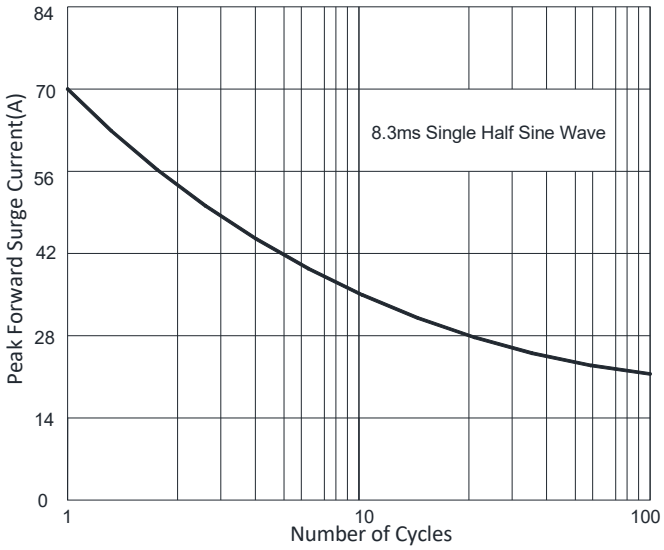


FIG3：Typial Forward Voltage

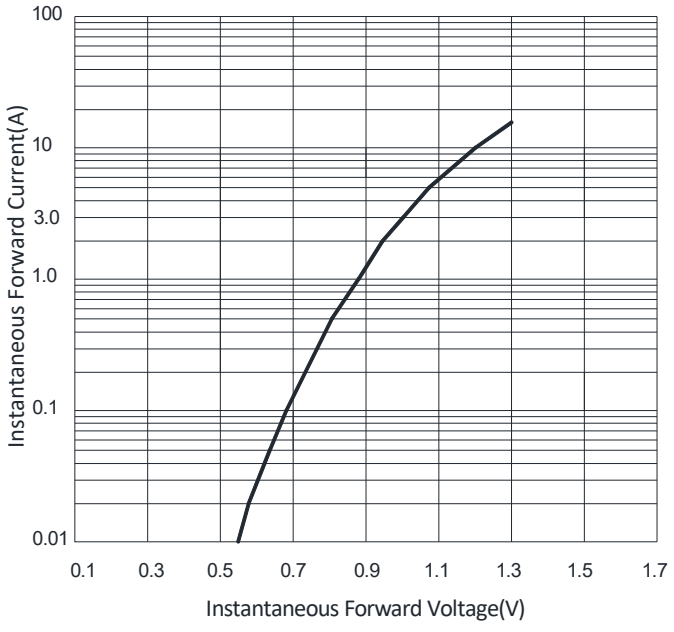


FIG4:Typical Reverse Characteristics

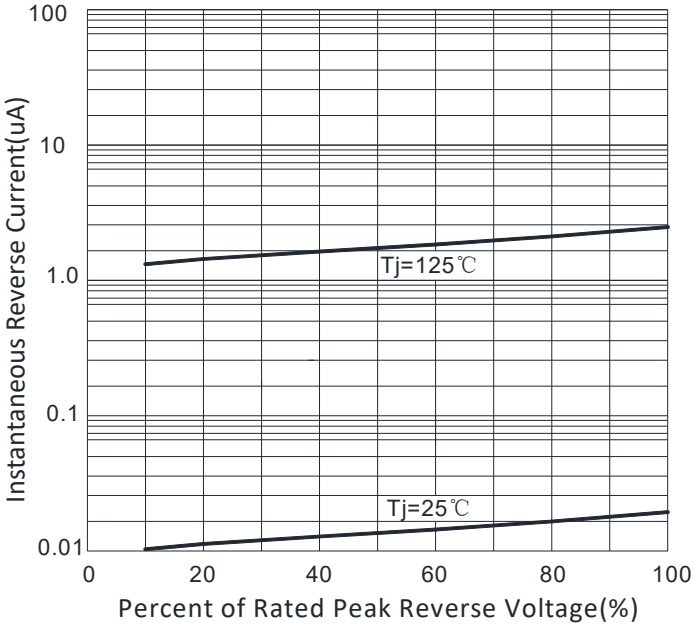
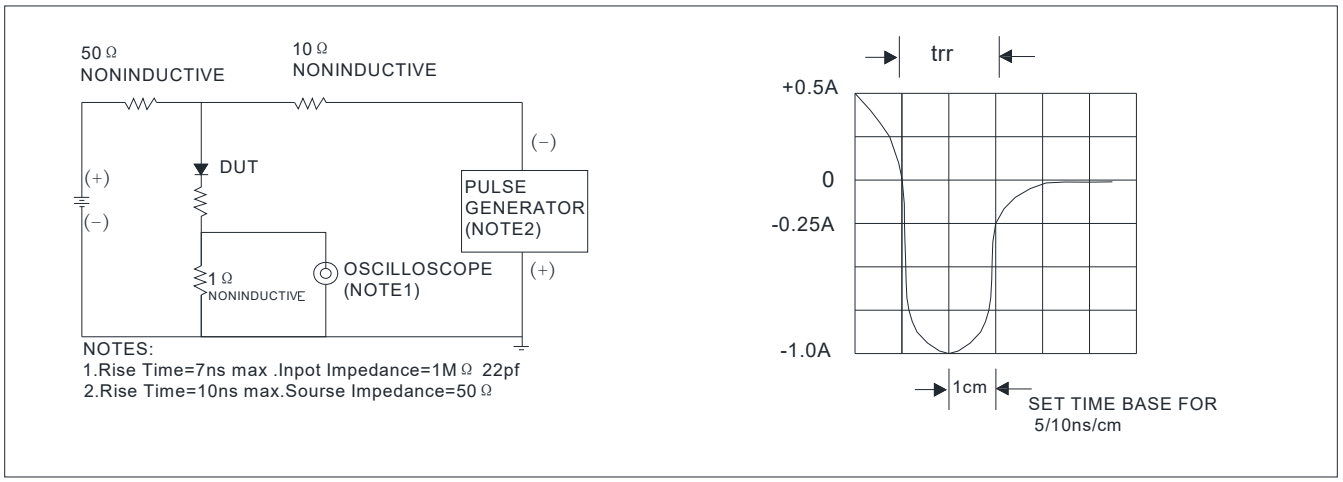


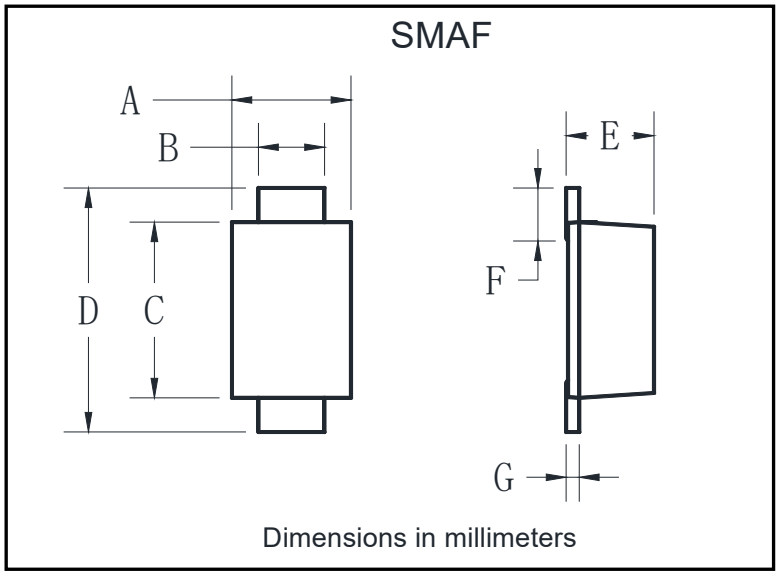
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

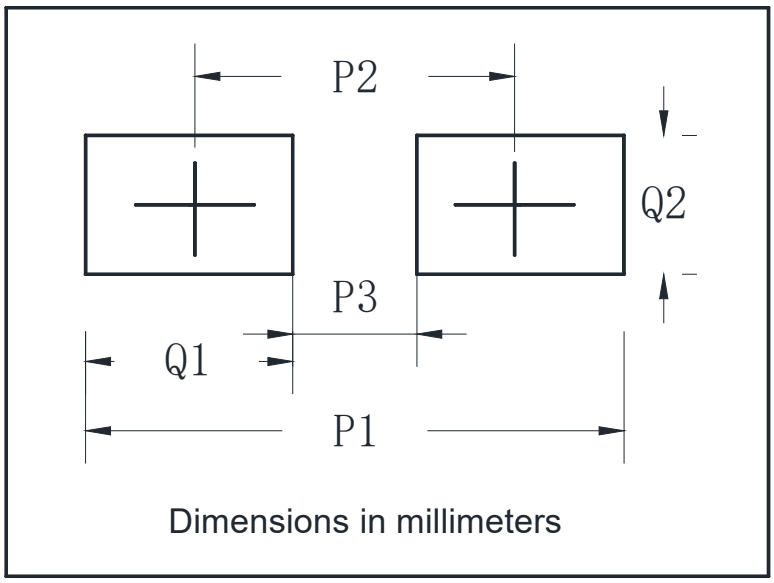
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
E3GF	F1	Approximate 0.034	3000	24000	96000	7” reel
E3GF	F2	Approximate 0.034	10000	/	160000	13” reel
E3GF	F3	Approximate 0.034	10000	/	120000	13” reel
E3GF	F4	Approximate 0.034	7500	/	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	0.25

■ 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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