

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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	E2AF	E2BF	E2CF	E2DF	E2FF	E2GF	E2HF	E2JF	E2KF
Device marking code			E2AF	E2BF	E2CF	E2DF	E2FF	E2GF	E2HF	E2JF	E2KF
Repetitive peak reverse voltage	V _{RRM}	V	50	100	150	200	300	400	500	600	800
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I _o	A	2.0								
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	50								
Storage temperature	T _{stg}	°C	-55~+150								
Junction temperature	T _j	°C	-55~+150								

ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	E2AF	E2BF	E2CF	E2DF	E2FF	E2GF	E2HF	E2JF	E2KF
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.0			1.3		1.7		1.85	
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 per diode @ V _{RM} =V _{RRM}	I _{RRM}	µA	T _a =25°C	5.0								
			T _a =125°C	100								

THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	E2AF	E2BF	E2CF	E2DF	E2FF	E2GF	E2HF	E2JF	
Thermal resistance	R _{θJ-A} ⁽¹⁾	°C/W	75								
	R _{θJ-L} ⁽¹⁾		25								

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

PACKAGING INFORMATION

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
E2AF-E2JF	X07	Approximate 0.034	3000	12000	96000	7" reel
E2AF-E2JF	Omit for Standard	Approximate 0.034	10000	20000	160000	13" reel

CHARACTERISTICS (TYPICAL)

FIG1: I_o-T_L Curve

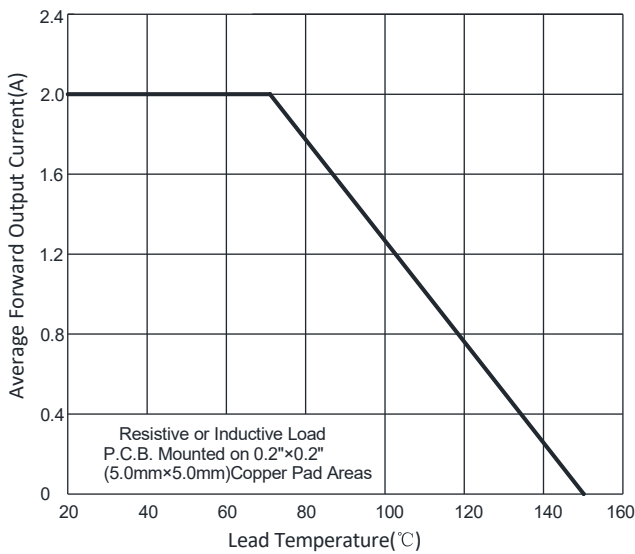


FIG2: Surge Forward Current Capability

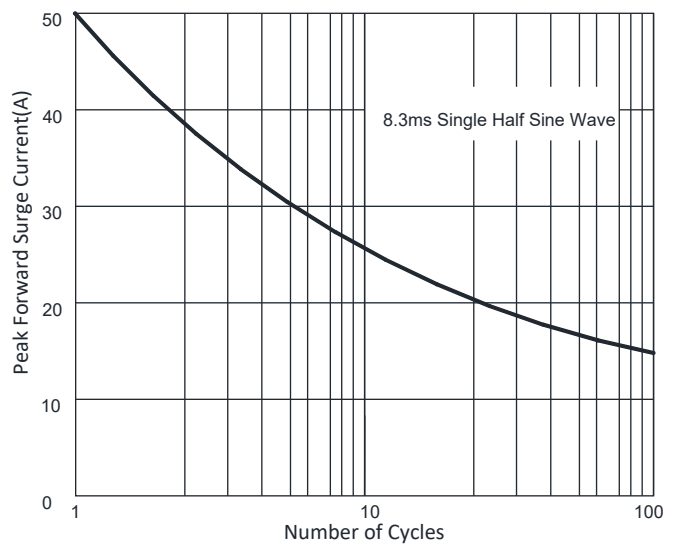


FIG3: Forward Voltage

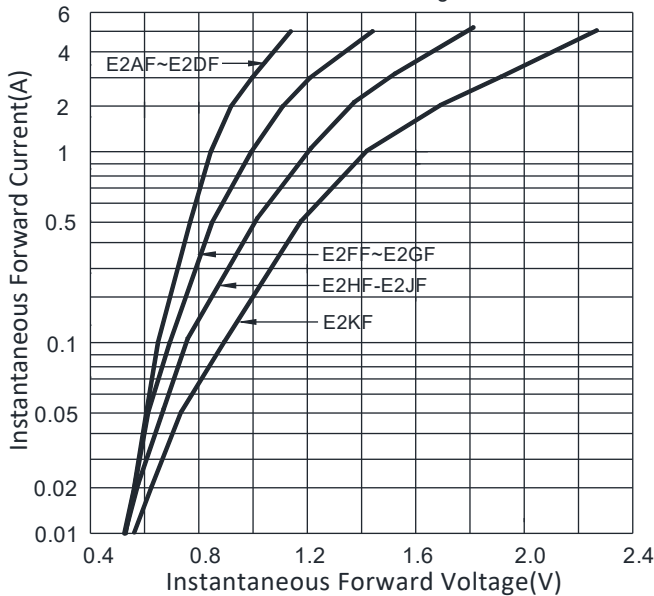


FIG4: Typical Reverse Characteristics

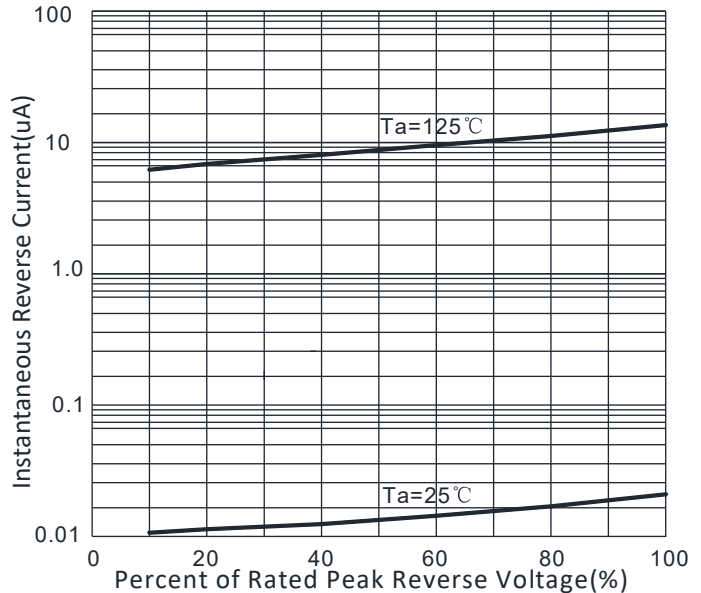
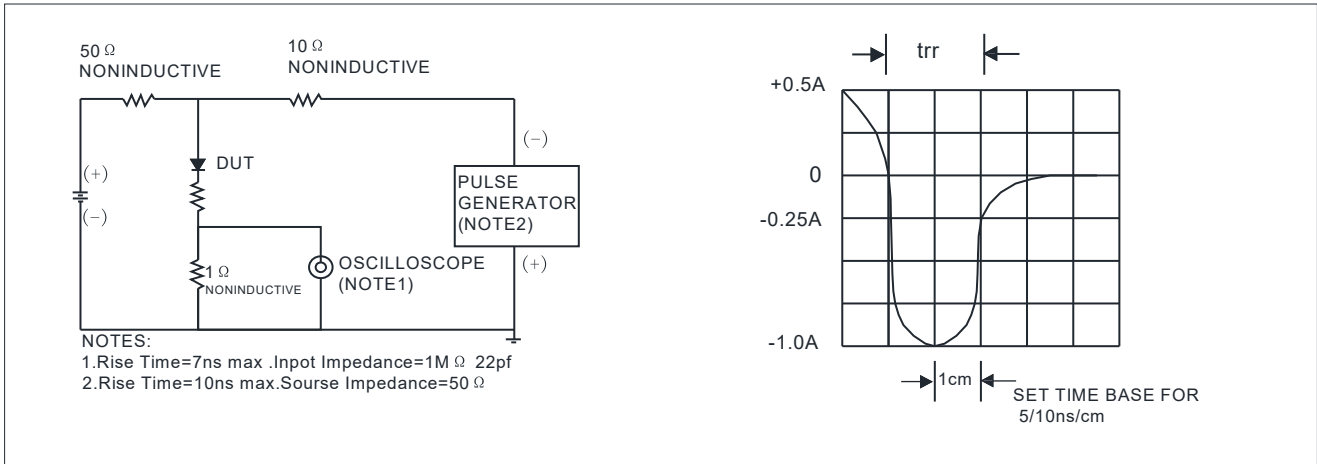
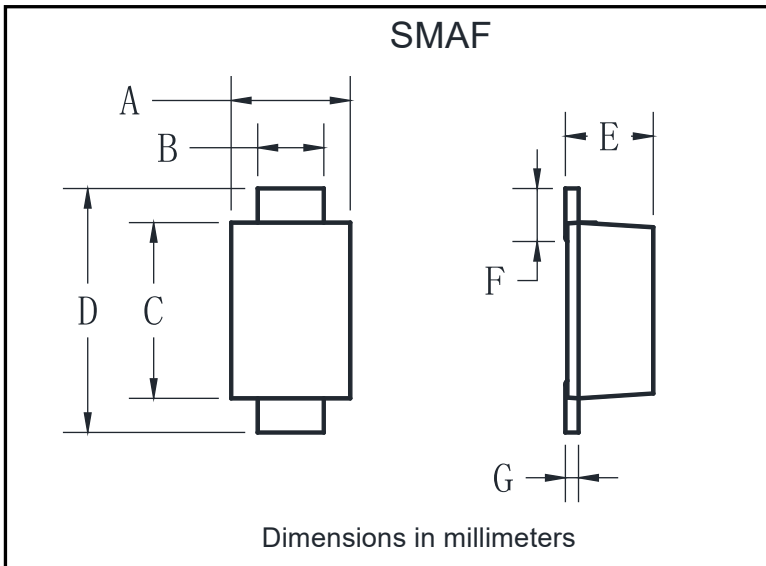


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

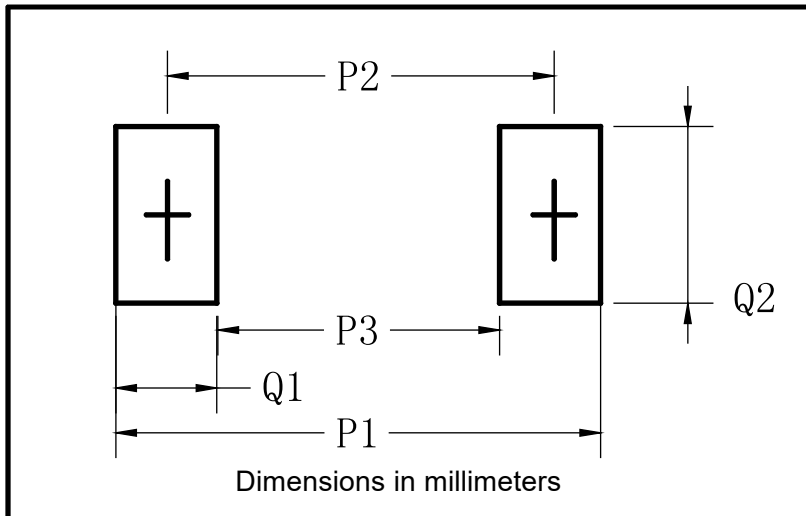


■ **OUTLINE DIMENSIONS**



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**



SMAF	
Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70