

■ **FEATURES**

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

■ **TYPICAL APPLICATIONS**

For use in low voltage high frequency inverters, Freewheeling, DC/DC converters, and polarity protection Applications.

■ **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	S32F	S33F	S34F	S35F	S36F	S38F	S310F	S315F	S320F
Device marking code			S32F	S33F	S34F	S35F	S36F	S38F	S310F	S315F	S320F
Repetitive peak reverse voltage	VRRM	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, Resistance load, T_a (FIG.1)	IO	A	3.0								
Surge(non-repetitive)forward current @60HZ Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	IFSM	A	70								
Storage temperature	Tstg	°C	-55 ~+150								
Junction temperature	Tj	°C	-55~+125				-55 ~+150				

■ **ELECTRICAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S32F	S33F	S34F	S35F	S36F	S38F	S310F	S315F	S320F
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=3.0A	0.50			0.70	0.85		0.90		
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	IR	mA	$T_a=25^\circ\text{C}$	0.50				0.10				
			$T_a=100^\circ\text{C}$	10				5				

■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S32F	S33F	S34F	S35F	S36F	S38F	S310F	S315F	S320F
Thermal Resistance	RθJ-A	°C/W	65 ¹⁾								
	RθJ-L		20 ¹⁾								

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
S32F-S320F	F1	Approximate 0.034	3000	24000	96000	7" reel
S32F-S320F	F2	Approximate 0.034	10000	20000	160000	13" reel
S32F-S320F	F3	Approximate 0.034	10000	20000	120000	13" reel
S32F-S320F	F4	Approximate 0.034	7500	15000	120000	13" reel

■ **CHARACTERISTICS (TYPICAL)**

FIG1:Io-TL Curve

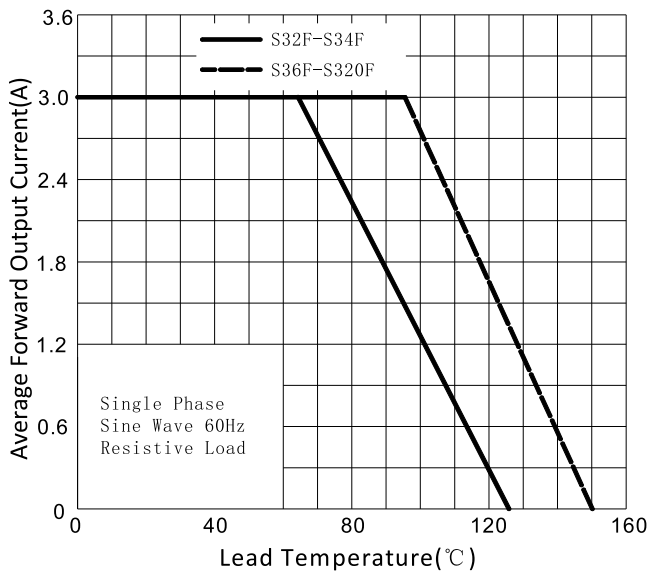


FIG2:Surge Forward Current Capability

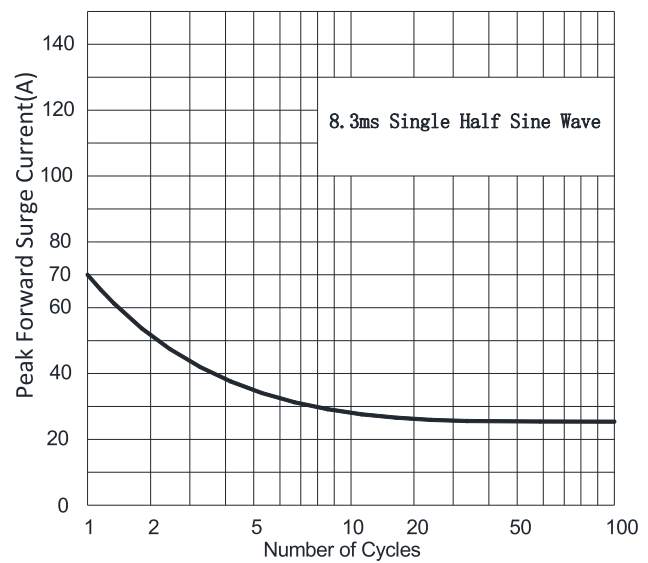


FIG3: Forward Voltage

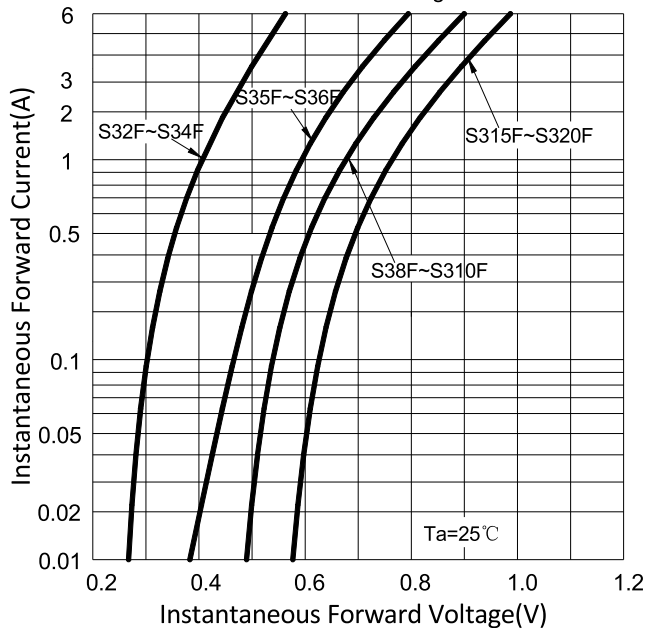
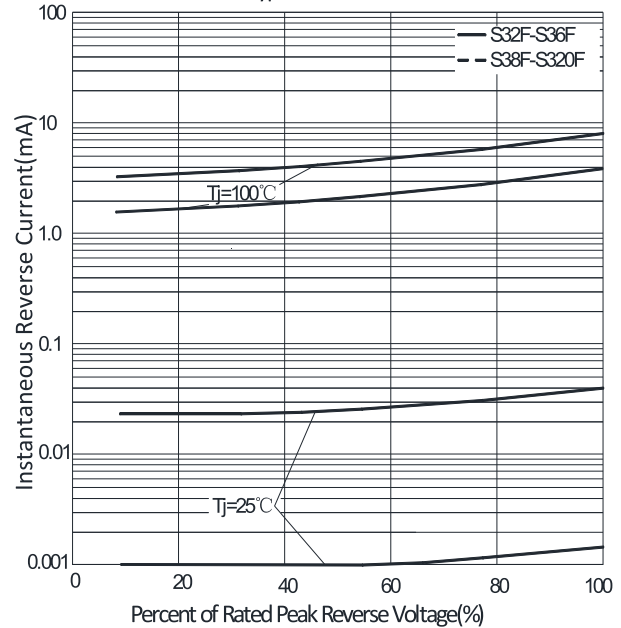
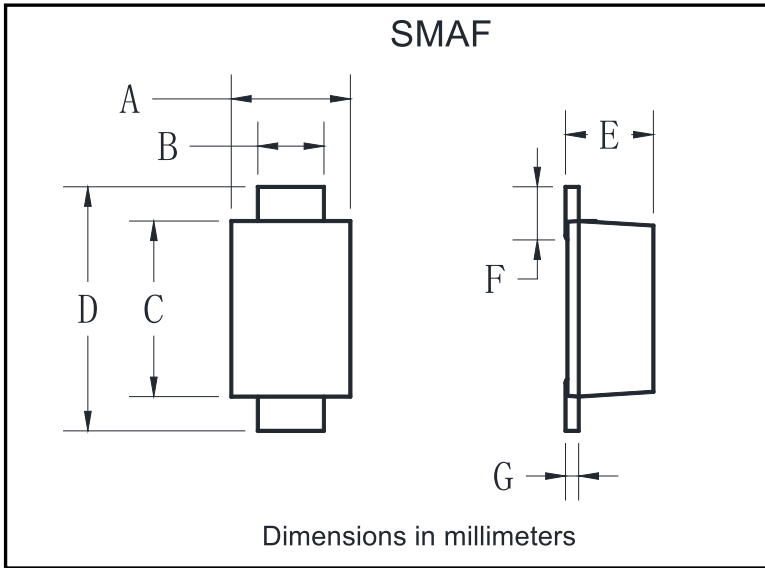


FIG4: Typical Reverse Characteristics

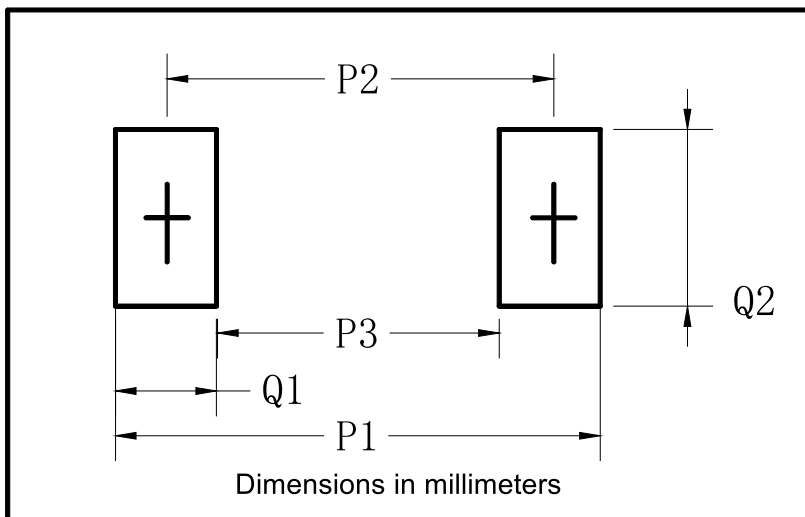


■ **OUTLINE DIMENSIONS**



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