

Surface Mount Schottky Rectifier

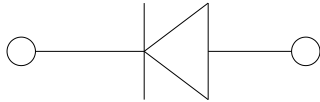


Features

- 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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S14F
Device marking code			S14F
Repetitive peak reverse voltage	VRRM	V	40
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, Tj=25°C	IFSM	A	30
Storage temperature	Tstg	°C	-55 ~+125
Junction temperature	Tj	°C	-55 ~+125
Typical Junction capacitance @4V,1MHz	Cj	pF	55

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S14F
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	0.50
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	IRRM	mA	Tj=25°C	0.50
			Tj=100°C	10

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S14F
Thermal Resistance	R θ J-A ⁽¹⁾	°C/W	65 ⁽¹⁾
	R θ J-L ⁽¹⁾		25 ⁽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

■ Characteristics (Typical)

FIG1: I_o-T_L Curve

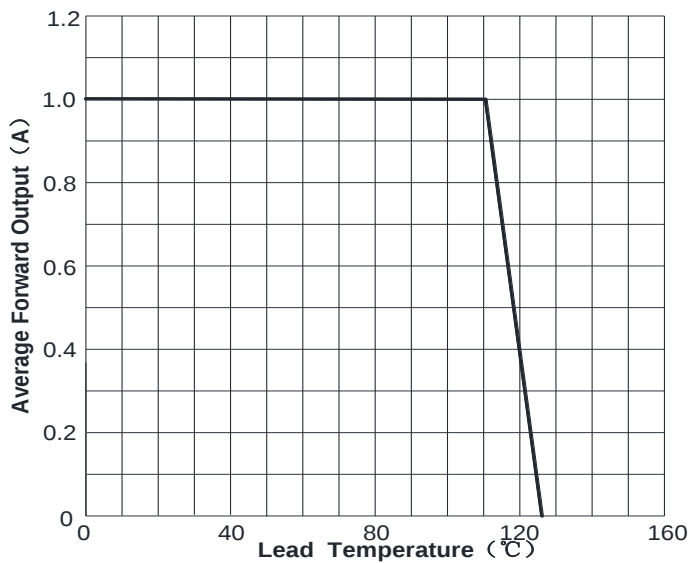


FIG2: Surge Forward Current Capability

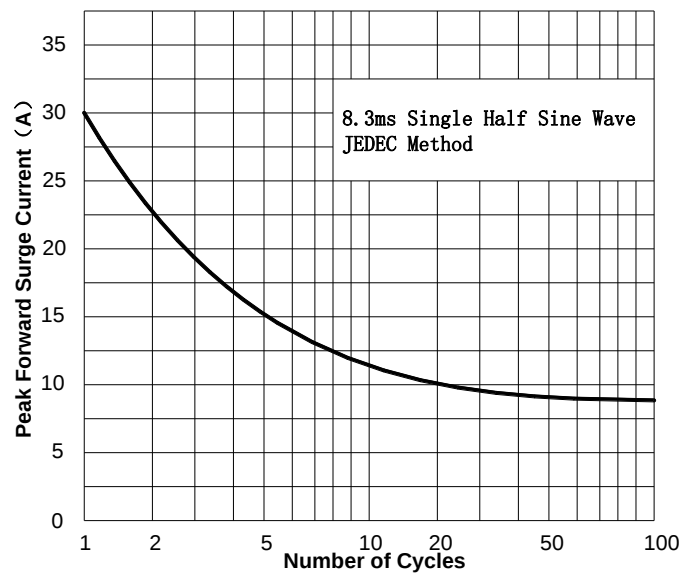


FIG3: TYPICAL FORWARD CHARACTERISTICS

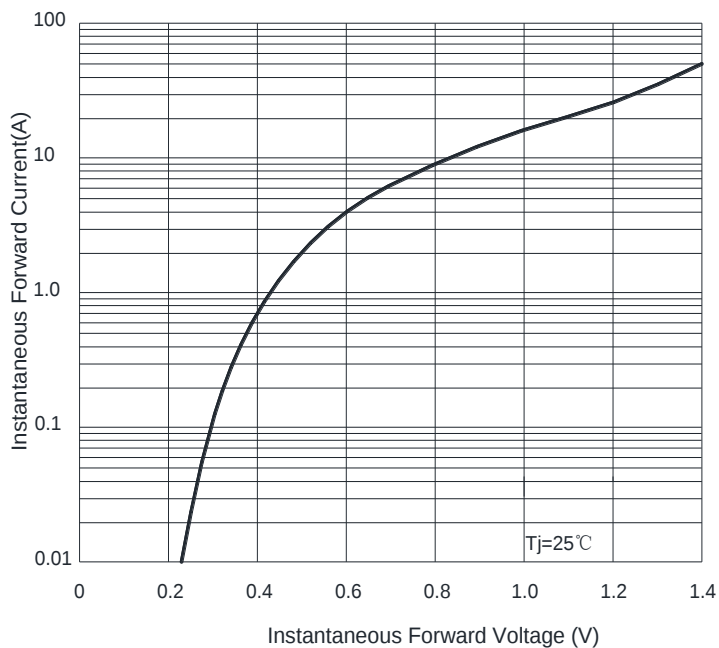
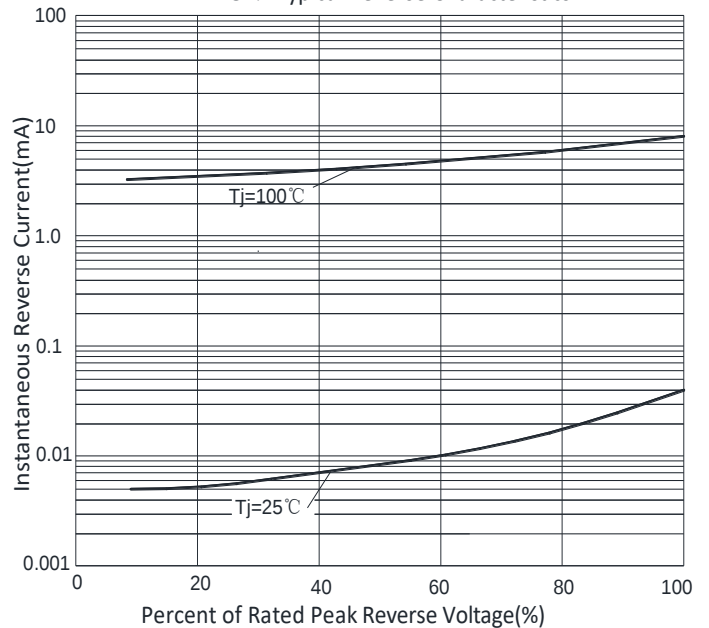


FIG4: Typical Reverse Characteristics



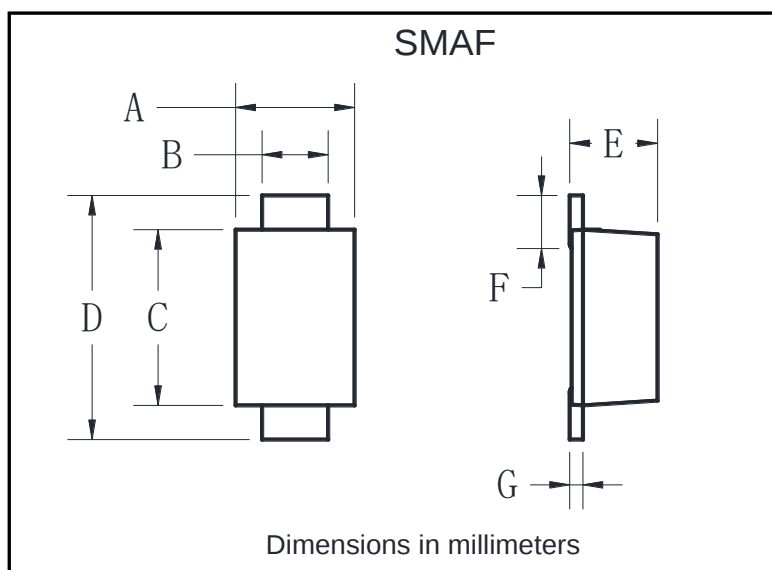


S14F

■ Ordering Information (Example)

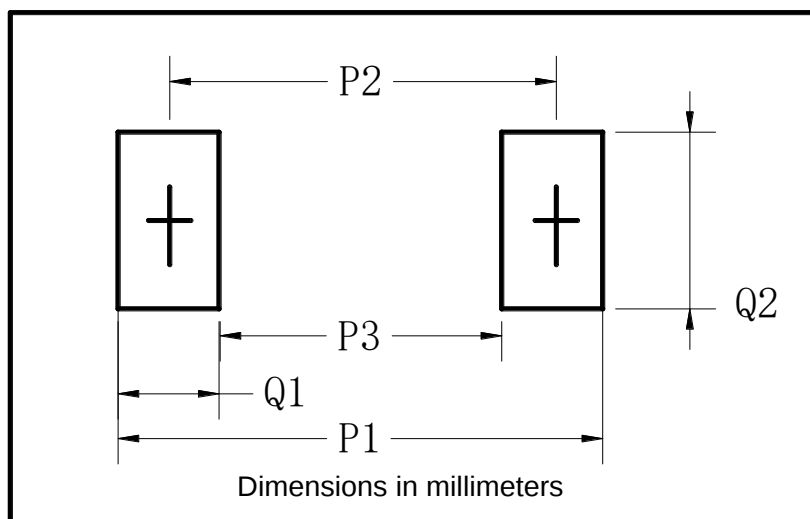
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S14F	F1	Approximate 0.034	3000	24000	96000	7" reel
S14F	F2	Approximate 0.034	10000	20000	160000	13" reel
S14F	F3	Approximate 0.034	10000	20000	120000	13" reel
S14F	F4	Approximate 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	0.50	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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