

Surface Mount Schottky Rectifier

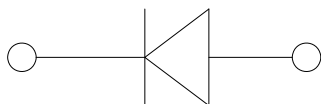


Features

- N+ IMP, Passivation Dep
- 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:** SMBF
Molding compound meets UL 94 V-0 flammability rating, -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	SS510BFH
Device marking code			SS510BFH
Repetitive peak reverse voltage	V_{RRM}	V	100
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	5.0
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Ta=25°C	I_{FSM}	A	100
Storage temperature	T_{slg}	°C	-55 ~+175
Junction temperature	T_J	°C	-55 ~+175

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS510BFH
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=5.0A$	0.85
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	mA	Ta=25°C	0.1
			Ta=100°C	5

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

Note2:Pulse test:pulse width 40mS

SS510BFH

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

PARAMETER	SYMBOL	UNIT	SS510BFH
Typical Thermal Resistance	R _{θJ-A}	°C/W	58
	R _{θJ-L}		20
	R _{θJ-C}		15

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ Characteristics(Typical)

FIG1: I_o-T_L Curve

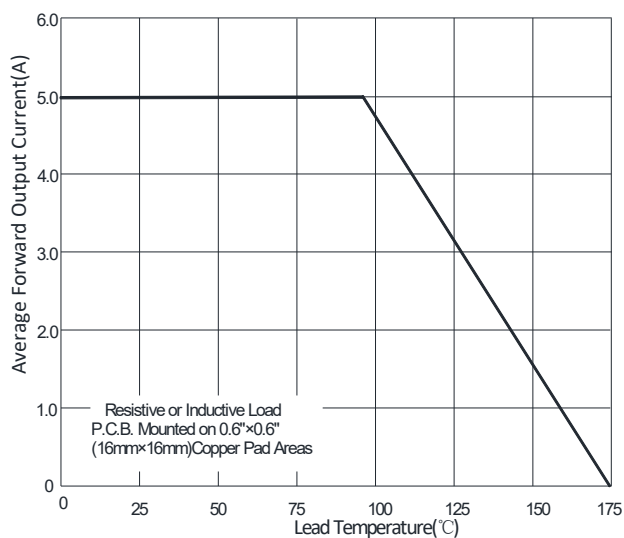


FIG2: Surge Forward Current Capability

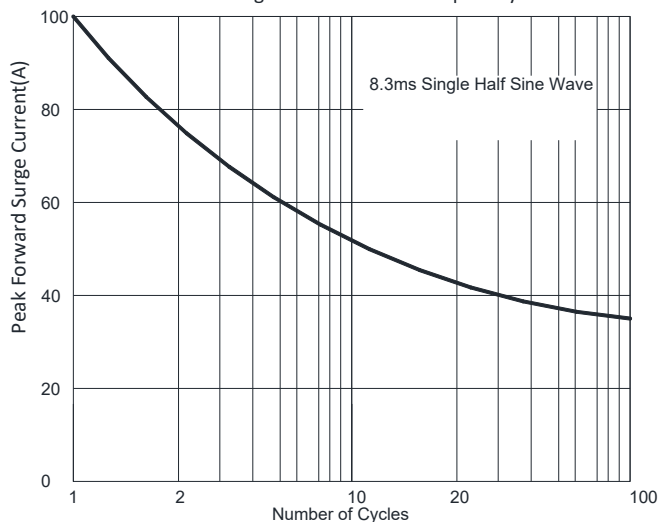


FIG3: Forward Voltage

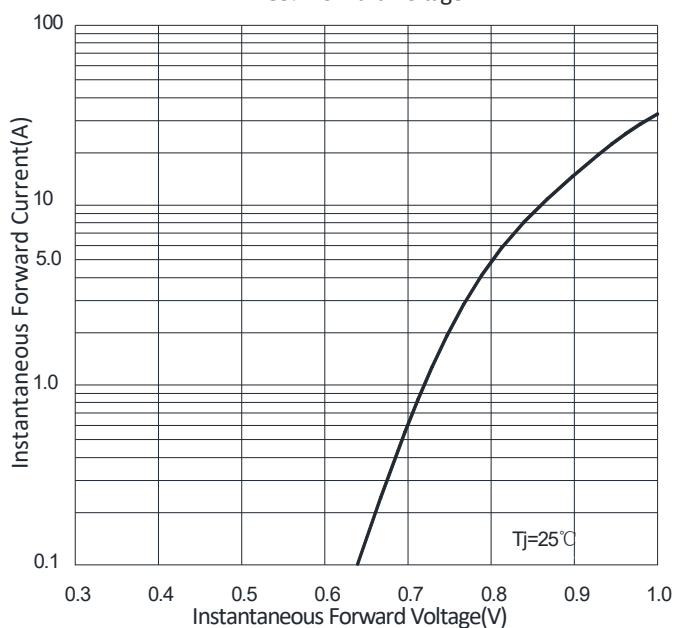
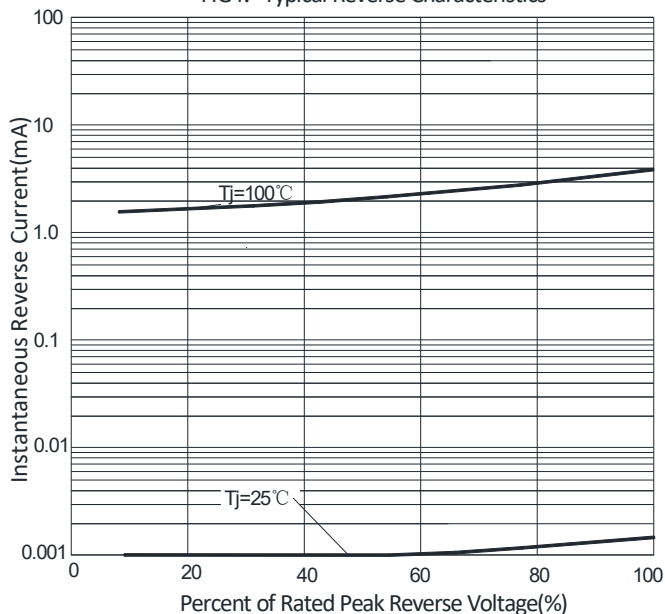


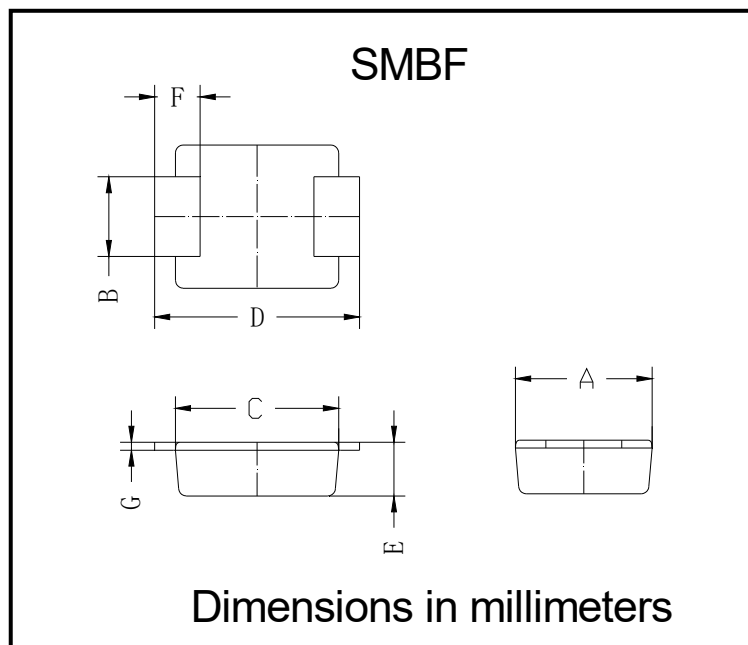
FIG4: Typical Reverse Characteristics



■ Ordering Information (Example)

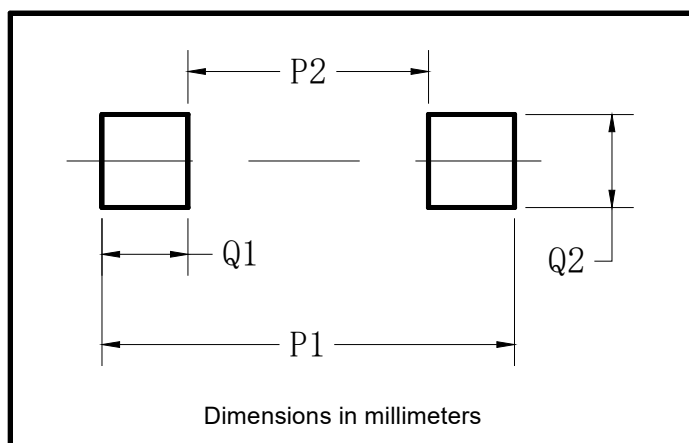
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS510BFH	F1	Approximate 0.065	5000	/	80000	13" reel

■ Outline Dimensions



SMBF		
Dim	Min	Max
A	3.40	3.80
B	1.90	2.10
C	4.15	4.45
D	5.10	5.60
E	1.05	1.55
F	0.70	1.35
G	0.15	0.25

■ Suggested Pad Layout



Dim	Millimeters
P1	6.20
P2	2.40
Q1	1.90
Q2	2.20

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