

TO-277 Surface Mount Schottky Barrier Rectifier

Features

- Low forward voltage
- Low power loss/ high efficiency
- Ultra low forward voltage drop,low power losses
- High forward surge current capability

Applications

For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications.

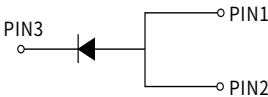
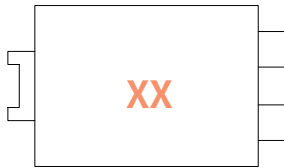
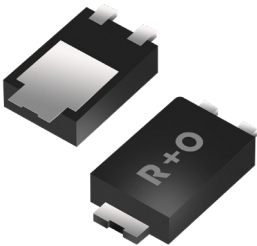
Mechanical Data

- Case: TO-277
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
150V
Forward Current
20 Ampere

TO-277



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SB20150
Device marking code			SB20150
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	150
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	20
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	250
Storage temperature	T_{stg}	°C	-55 ~ +150
Junction temperature	T_j	°C	-55 ~ +150
Typical Thermal Resistance	$R_{\theta J-L}$	°C /W	15

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SB20150
Maximum instantaneous forward voltage	$I_F=20A$	V_F	V	0.90
Maximum DC reverse currentat rated DC blocking voltage	$V_R=V_{DC}, T_J=25^{\circ}C$	I_{R1}	μA	5
	$V_R=V_{DC}, T_J=125^{\circ}C$	I_{R2}	mA	10

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

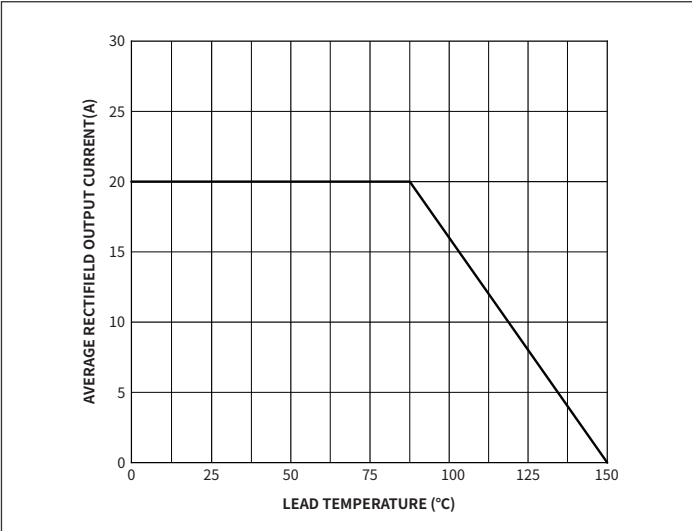


Fig.1 Forward Current Derating Curve

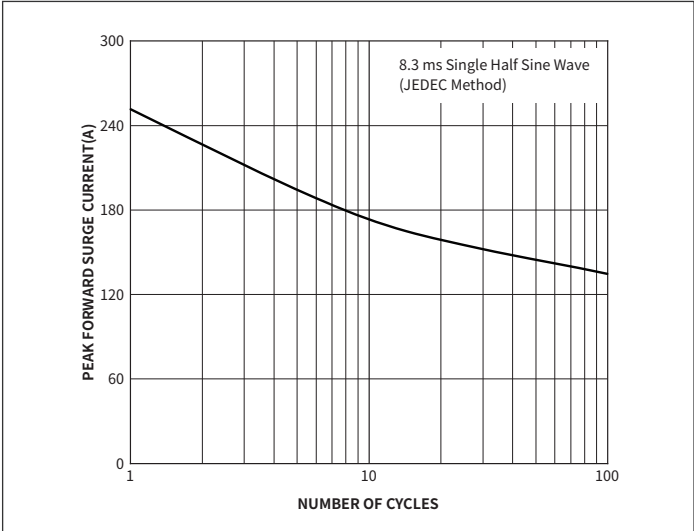


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

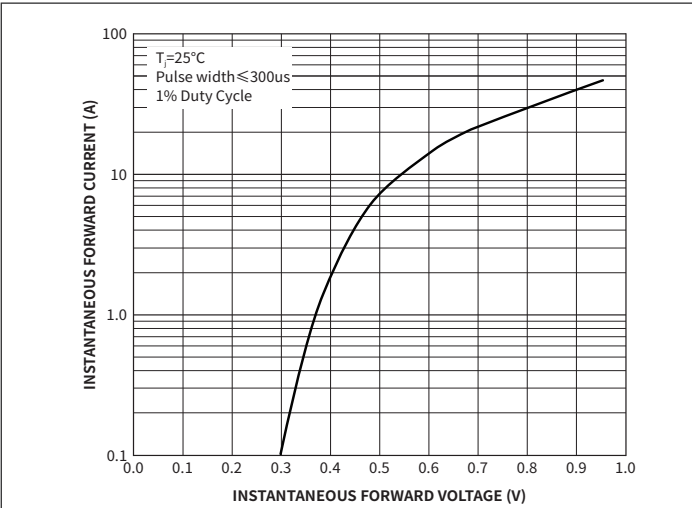


Fig.3 Typical Forward Voltage

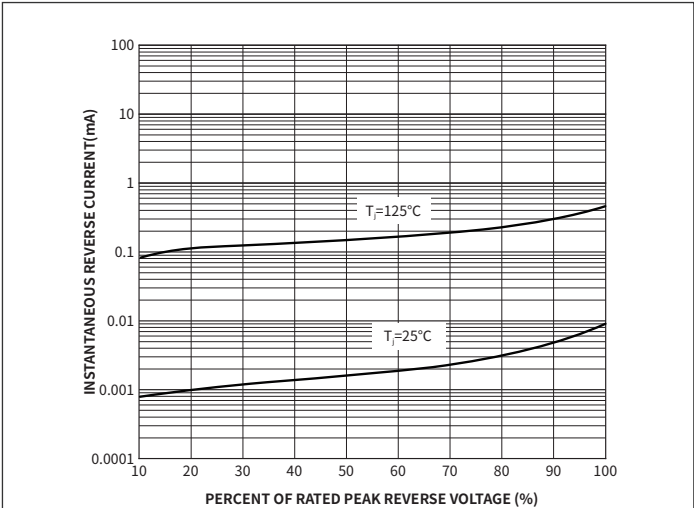


Fig.4 Typical Reverse Characteristics

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
TO-277	R3	0.090	5000	10000	80000	13"

● Package Outline Dimensions (TO-277)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	6.300	6.700	0.248	0.264
B	3.950	4.300	0.156	0.169
c	0.410	0.710	0.016	0.028
D	5.280	5.880	0.208	0.231
E	1.70	2.00	0.067	0.079
e	0.80	1.00	0.031	0.039
F	1.70	1.90	0.067	0.075
G	2.850	3.150	0.112	0.124
M	3.25	3.85	0.128	0.152
N	1.44	1.74	0.057	0.069
O	0.25	0.40	0.010	0.016
P	1.05	1.20	0.041	0.047

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.400	3.800	0.134	0.150
B	4.500	4.900	0.177	0.193
C	1.200	1.600	0.047	0.063
D	0.600	1.00	0.024	0.039
E	3.670	4.070	0.144	0.160